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# manufacturers record

THE NEWSMAGAZINE OF THE INDUSTRIAL SOUTH AND SOUTHWEST

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Dixie Paint & Varnish has Growth Record .....p. 36
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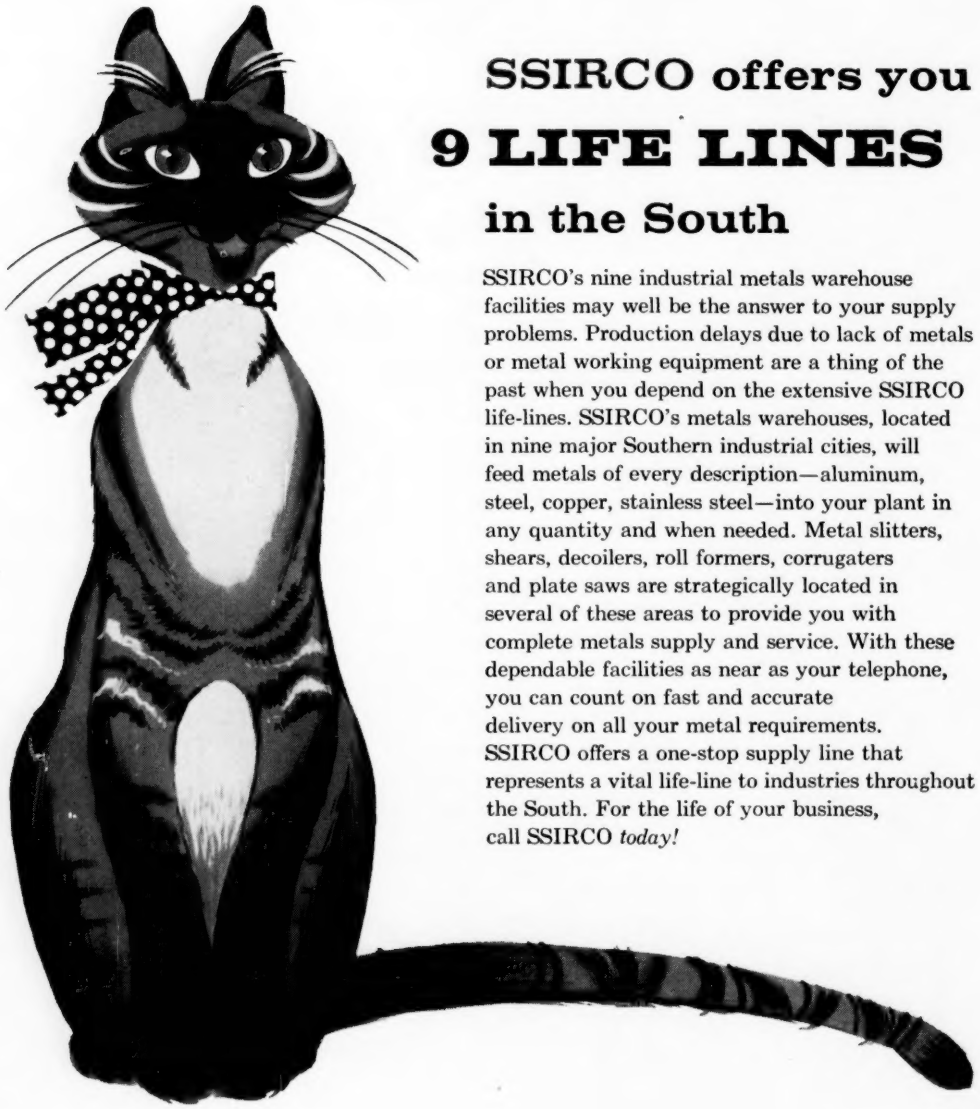
*Monsanto's Elemental Phosphorus Plant in Tennessee is example of Southern Chemical Industry. Page 25.*

A CONWAY PUBLICATION EST. 1882



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*Our 43rd Year*

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Birmingham, Alabama
Louisville, Kentucky
Memphis, Tennessee
Miami, Florida
Nashville, Tennessee
Raleigh, North Carolina
Richmond, Virginia
Savannah, Georgia

**nufacturers record**

NEWSMAGAZINE OF SOUTHERN ENCE AND INDUSTRY—EST. 1882

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BPA

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TRADE MARK

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## QUALITY MADE FROM QUALITY STEEL

DIXISTEEL merchant bars are quality-controlled from start to finish. At each step of production — from molten steel to the finished hot-rolled product — checks and rechecks are made to assure proper physical properties, finish and tolerances.

DIXISTEEL Bars and Shapes are produced in a wide variety of shapes, sizes and grades — plain or galvanized.

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**Atlantic Steel Company**

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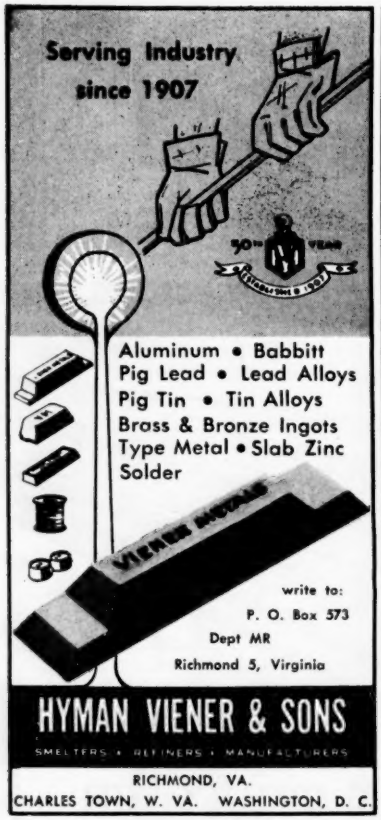




## LETTERS

**SIRS:** For some months we have been receiving your magazine. Mrs. Mann and I have read a good many of the articles in each issue. We are both Southerners, our business is in the South, and we are vitally interested in the industrial growth your magazine ably reports.

Primarily we manufacture wooden beverage cases, but we are fully equipped to make industrial boxes for material handling in plants and shipment of finished goods. In the North, most of the production in plants such as ours is devoted to these two items. So our interest in the growth of the industrial South is understandable. The South is our natural market and new industries are potential customers. At present we employ between 60 and 64 people; not enough to qualify for listing as a "leading industry" in your 1957 directory edition. We do have, however, the second largest payroll in this city of 18,000 and are the second largest user of electric power. Our product is useful to other industry. We feel that these facts may perhaps entitle our company to a listing under No. 24 of your "Where to Buy It" section, which we understand will appear in a later issue.

Our business is a family corporation in which both Mrs. Mann and I are active. The lumber, the nails, the paint and the ink we use are all produced in the South. (At present, steel strapping is not made in the South.) We have shipped our product to Boston in the East, Las Vegas in the West, Tampa in the South and Aberdeen, S. D. in the North.

We like the South and we like our future for we firmly believe, as it is so aptly put in the vernacular "SAVE YOUR CONFEDERATE MONEY, BOYS, FOR THE SOUTH'S GONNA RISE AGAIN."

Cameron Mann, President
Delta Case Company, Inc.
West Memphis, Arkansas

**SIRS:** . . . The Adams Hard-Facing Company, even though it is a small company, it is the largest plant of its kind in the world. We employ a total of 75 employees; 55 in Guymon, 14 in Shafter, California, our Pacific Coast Division, and 6 in Wakita, which is also a branch . . . We manufacture hard-faced grader blades . . .

C. E. Adams, President
Adams Hard-Facing
Company
Guymon, Oklahoma

**SIRS:** We take this opportunity to express our thanks for the publicity concerning our new plant located at Leeds, Alabama which appeared in the July issue of MANUFACTURERS RECORD. We also found the story on page 12 by Mr. Harvey S. Firestone, Jr., to be very objective and heartwarming concerning the outlook for further economic growth in the South. This gives us a real lift and it is gratifiying to know that your publication is doing a complete work in pointing out the tremendous opportunity awaiting southern markets.

Faus Curley
Public Relations
Department
A. J. Gerrard & Company
Melrose Park, Illinois

**SIRS:** We appreciate your courtesy in re-


*Nearly 100 Industries Selected Oklahoma's*

**SAND SPRINGS—TULSA Industrial District!**

**WHO THEY ARE . . .**

Commander Mills, Inc., South West Box Co., Kerr Glass Mfg. Corp., American Smelting and Refining Co., Southwest Porcelain Steel Corp., Pedrick Laboratories, Inc., Orbit Valve Co., National Tank Co., Frank Wheatley Pump and Valve Mfr., Lock Joint Pipe Co., General Paint Corp., American Steel and Wire Co., Bethlehem Steel Co., Lincoln Electric Co., Southwest Steel Corp., Standard Magnesium Corp., Standard Aluminum Co., Enardo Mfg. Co., Sheffield Steel Corp., The Boardman Co., Youngstown Steel Products Co., Mo-Vi, Inc., Boyles Galvanizing Co., Stanley Home Products Co., Santa Fe Engineering and Equipment Co., The Fibercast Corp., Graver Tank & Mfg. Co. and many others.

**WHAT THEY MAKE . . .**

*Products manufactured and distributed in the national market (many of them exported) by the Sand Springs-Tulsa area companies include Textiles, Fruit Jars, Corrugated Boxes, Zinc Products, Steel, Electric Fixtures, Chemicals, Canned Foods, Janitor Supplies, Meat Products, Petroleum Products, Dog Food, Porcelain Enameled Steel, Paints and Varnishes, Building Materials and many others.*

**WHY?** FACTORY SITES • TRACKAGE • WAREHOUSES • ABUNDANT WATER • NATURAL GAS • ELECTRIC POWER • SATISFACTORY LABOR-LIVING CONDITIONS • COMPLETE BELT-LINE FREIGHT SERVICE — Direct connections with Frisco, Santa Fe, Katy and Midland Valley Railroads.

*Write for Complete Information*

**SAND SPRINGS HOME INDUSTRIAL DEPT., SAND SPRINGS, OKLA.**

gard to the Blue Book of Southern Progress. We find it very helpful, and we shall continue to use both the Blue Book and MANUFACTURERS RECORD as long as they continue to publish the same type of information. Much of this information is not readily found, and much is published here first, both strong reasons for continuing our subscription.

Mabel Wilkerson, Librarian
Federal Reserve Bank of Dallas
Dallas, Texas

**SIRS:** I think the July RECORD is one of the best yet. I read the article by Harvey Firestone, Jr. and it is quite good . . .

Frank K. Shaw
Assistant General Manager
Atlantic Chamber of Commerce
Atlanta, Georgia

**SIRS:** Would you please send us about ten copies of the July issue of MANUFACTURERS RECORD, in which the article by Harvey S. Firestone, Jr. appeared. We have had numerous requests for copies of this issue . . .

Robert L. Van Der Velde
Department of Public Relations
The Firestone Tire & Rubber Company
Akron 17, Ohio

**► Copies sent.**

**SIRS:** Kindly send us a copy of your 144 page Market Survey. We have found your publication very helpful in finding new customers . . .

D. B. McLay, Purchasing Vice President
Dixie Controller, Inc.
Birmingham 9, Alabama

**► Copy sent.**

**SIRS:** May I thank you and MANUFACTURERS RECORD for the excellent job you did on Southwest Georgia in the July issue. Especially do I thank you for the special mention and pictures of the Sunnyland Packing Company and the Dawes Silica Mining Company here in Thomasville. In appreciation, please accept our invitation to call upon this office at any time we may reciprocate.

C. Dewey Norwood,
Secretary-Manager
Thomasville-Thomas County Chamber of Commerce, Inc.

**SIRS:** I read with interest your article in the MANUFACTURERS RECORD concerning the potentialites of Southwest Georgia for industrial development.

Calhoun County was my home. It was my privilege to graduate from Bainbridge High School and to work in the Albany city system for several years. These statements are made to establish my knowledge of the area.

I read with keen interest and appreciation your descriptive statements and the conclusions you reached.

Georgia is on its way. An able journalistic interpretation will further speed our progress.

Jim Cherry, Superintendent
DeKalb County Board of Education
Decatur, Georgia

**SIRS:** We were very much impressed with the comprehensive article on packaging contained in the July issue of MANUFACTURERS RECORD and would very much appreciate it if you would send us ten additional copies of the current issue by return mail.

At the same time we are concerned about the poor showing of North Carolina by comparison with other states in the list of packaging manufacturing companies . . . We realize, of course, that those companies who have 250 or more employees are listed, but under this measurement North Carolina would have more than a dozen firms that would qualify . . .

As a matter of fact we wonder whether measurement of such firms by number of employees is the proper yardstick, and I am sure that you are aware that the packaging industry is one that has become highly mechanized, that many firms have far greater productive capacity than older, less highly mechanized operations . . .

We are sure that you share our desire that North Carolina be properly represented in such lists which are given broad distribution through your publication.

John J. Appleyard
Chief Development Engineer
North Carolina Department of Conservation and Development, Raleigh, N. C.

**► This letter was selected as typical of the great number of letters received on this subject from state agencies and from individual companies from throughout the South. As a result of the remarkable interest shown, Manufacturers Record is planning to run in a subsequent issue another article on the packaging field, this time with the emphasis on steel containers manufactured in the South. We invite companies so concerned to send MR's editorial department full information about their operations.**

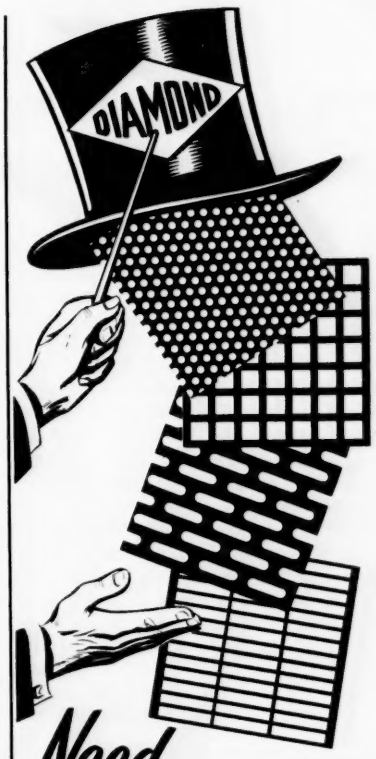
**SIRS:** on July 19 we asked you to begin a subscription for us to the MANUFACTURERS RECORD and today we received the July issue. The publication, however, is of great interest to me, and I should like to have the January through June, 1957, issues. If you wish, you might send me these six issues and bill me for them, in addition to the year's subscription . . .

Ettore Scampicchio
Italian Trade Commissioner
New Orleans 12, La.

**► Request answered.**


GALVANIZING
Prompt Delivery • Zinc and Cadmium Plating
Phone: 59-5401 METALPLATE CO. 757 N. 44th St. Birmingham, Ala.






Need
QUICK ACTION on Perforated Metal Sheets or Parts?

We're not magicians — can't pull rush jobs out of a hat — but when quick action is needed we're usually able to ship on the specified date; or even a little sooner.

One reason is because we carry large quantities of all commonly used metal sheets and plates IN STOCK. Another reason is because we HAVE hundreds of modern tool arrangements, for a great variety of attractive perforating patterns, in a wide range of sizes. If a special pattern or layout is needed, for some particular purpose, we can MAKE the necessary tools to order.

Engineers and Designers will find all the information they need, to make a quick, acurate, selection from standard Diamond perforating patterns and sizes, in our 36-page Catalog No. 39. No charge or obligation: we're glad to send it to anyone who can use it to advantage. Estimates submitted promptly.

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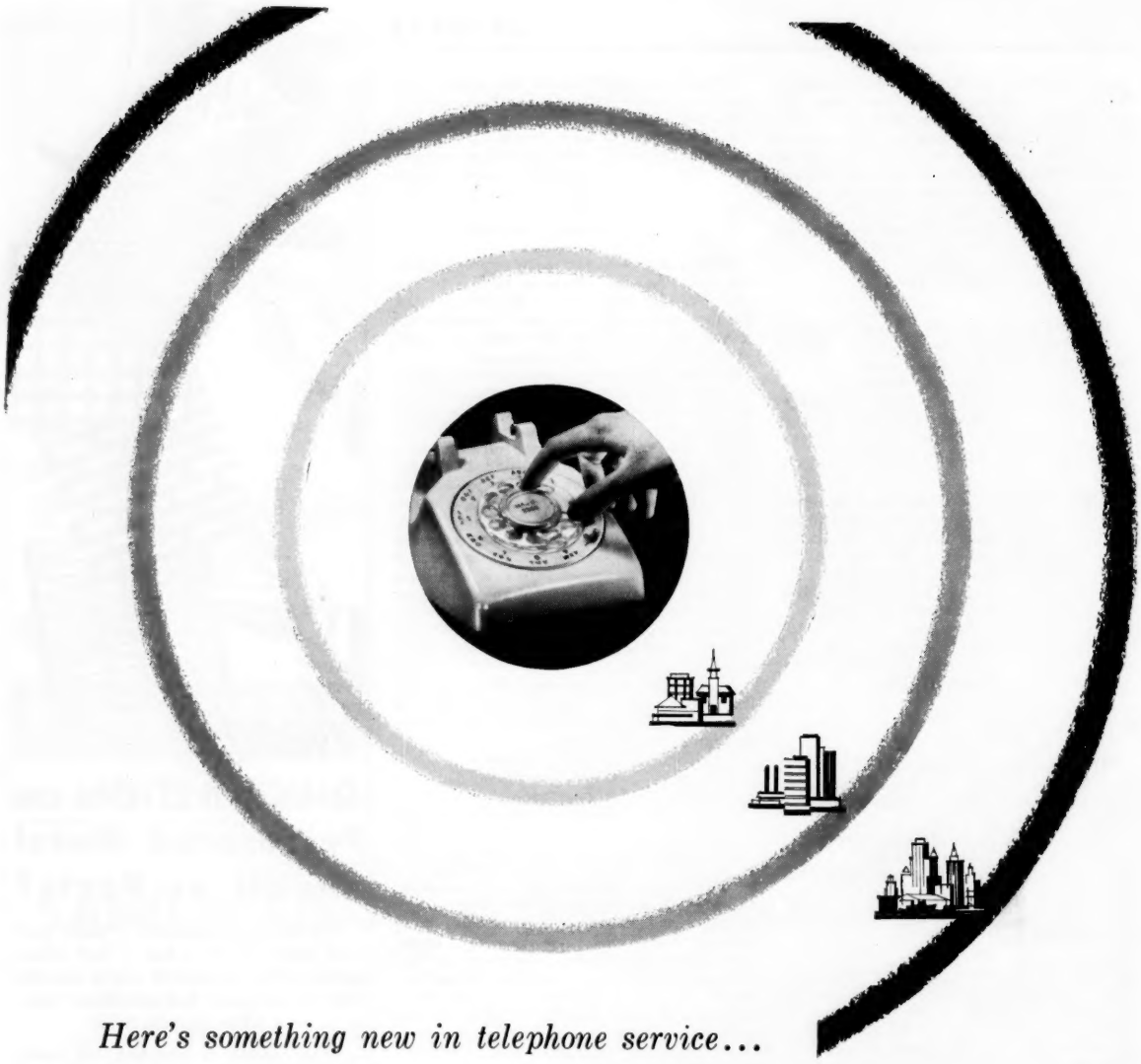
Los Angeles Area



*Here's something new in telephone service...*

# Millions of people can now dial long distance calls

***And millions more will enjoy the added speed and convenience of Direct Distance Dialing...through Bell System's continuing program of research and development.***

Direct Distance Dialing—one of the greatest improvements in modern telephone service—is being made available rapidly to more and more people throughout the country.

By the end of this year about 5,300,000 of our customers, in some 440 localities, will have nationwide DDD and will be able to dial directly up to 35,000,000 telephones. (Over 11,000,000 customers already are able to dial directly to nearby cities and towns.)

DDD brings with it new standards in convenience and speed of service. Many calls of as much as 3000 miles are now dialed directly and go through in a matter of seconds. This is made possible by ingenious electrical switching systems that pilot your call directly to the particular telephone you want out of many millions. If one route is busy, another is automatically selected.

Another remarkable feature is the automatic accounting system for taking down the number you called, the date, and how long you talked. Station-to-station calling—already the quickest way to telephone out-of-town—becomes even faster with DDD.

This development is one more big step in the never-ending program to make telephoning more convenient to more and more people.

***Working together to bring people together...*** **Bell Telephone System**

In late September the Southern Governors' Conference will hold at Sea Island, Georgia, their twenty-third annual meeting. A significant part of that conclave will be the general business session during which industrial development in the South—within the several states and among the states—will be discussed.

The discussion leaders will be members of the Conference's Committee on Industrial Development, a body set up at last year's meeting following recommendations made by the Southern Association of Science and Industry.

For the past three years SASI has made, at the special invitation of the Governors' organization, a report on Southern progress and opportunity to the conference. These three previous reports were well-received by the group and received widspread recognition by the daily press not only in the South but also in other parts of the nation.

SASI officials have indicated that the report to this year's gathering will outline plans for the continuation of several existing programs and a series of new projects designed to strengthen the South's position in industrial development. To be given special emphasis will be a proposal resulting from the Southwide Market Research Conference recently sponsored by SASI in behalf of the Southern Governors.

All indications are that the recommendations to be presented at the 1957 meeting by SASI will be of the most progressive and constructive sort. MANUFACTURERS RECORD hopes, therefore, that the report will receive all the consideration it merits and that the Governors will hasten to implement the suggested program.

### "Look Ahead—Look South"

Private enterprise in the South, notably the service industries, has been an important factor in helping to sell the region's attributes to other parts of the nation and in fostering the remarkable economic growth that has characterized the area in recent years.

Among those which have done an outstanding job in carrying the message of the region's industrial potential all over the United States is the Southern Railway System.

Since 1942 the Southern has conducted a continuous and intensive national advertising program inviting consideration of the growth outlook of the South and of the myriad opportunities that exist for industries and businesses of every kind.

The slogan of these advertisements has been, "Look Ahead—Look South," a phrase that has become familiar to millions of readers of great financial, business and news publications.

Concerning this, Southern Railway President Harry A. DeButts comments that, "it is as justified today as ever despite the phenomenal increase in industry and business that has already occurred. In 1957—fifteen years and many thousands of new industries later—we are still able to accent opportunity, to point to the youthfulness of our economic territory and the vigorous, still-growing-up years that are ahead in the South."

The Southern has just released a folder containing reproductions of representative "Look Ahead—Look South" advertisements, and this collection of cheerful, effective ads serves as a fine example of the sort of thing business and industry can do to give impetus to the region's development.

### Growing Southern Market

We had the opportunity the other day of hearing another of the nation's leading industrialists point up the advantages that have caused and are continuing to cause business to trek Southward.

The occasion was the laying of the cornerstone at the new Atlanta Training Center of Chrysler Corporation.

At a luncheon session preceding the ceremony, Byron J. Nichols of Detroit, general manager of automotive group marketing for the corporation, told us that his company's sales in the ten-state Southern area to be served by the center are 27.4 per cent higher than they were a year ago. He said this was a bigger increase than Chrysler's national average of gain, indicating the excellence of the Southern market.

Citing the prediction made by the Southern Association of Science and Industry that more than 10,000 additional new plants will be built in the South within the next decade, Mr. Nichols commented: "If this is a safe assumption, then consumer buying and income, already at unprecedented heights, can be expected to reach even higher levels."

The new training center for the South, which will serve close to 2,000 dealers and their 25,000 employees in the region, was the first to be announced in a series of four to be built by Chrysler. The others are to be in Rye, New York; Chicago, and Los Angeles.

### Walter F. George

When Former Senator Walter F. George of Georgia died last month there ended the distinguished career of a man who had earned a permanent place of honor in the nation's history.

At the time of his retirement from the United States Senate last year, George had served more than 34 years with that body. Those years were marked by continuous growth in his stature as a statesman, and he came to be one of the most powerful figures of our time.

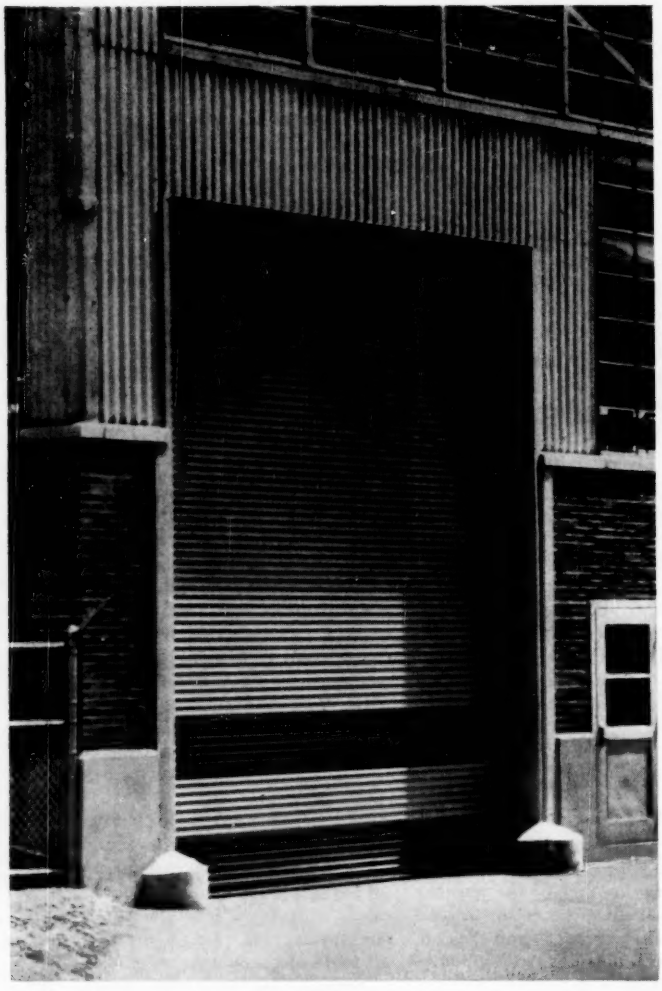
He used his power constructively and for the good of the country, for he had years ago matured beyond partisanship. As a result he gained the sincere respect of not only his fellow senators and his countrymen but also of the leaders in all parts of the world.

Senator George was always the friend of the businessman. He believed in the preservation of American capitalism and in the system of free enterprise upon which this nation was founded. Much of the progress that Southern business and industry have been able to make may perhaps be traced to efforts that he made on behalf of his state and his region.

The Georgia statesman will be sorely missed, but he has left a heritage that will be an inspiration for generations to come.—J. D.

## *In Your Constant Search for LOWER COSTS —*

# Are You Overlooking Doors?



Whether operated constantly, or only occasionally, doors affect other plant costs in ways that sometimes escape management's closest scrutiny. For example, note these cost-cutting features of Kinnear Rolling Doors—made by the *originators* of the door with the interlocking steel slat.

**Extra Space.** Kinnear Rolling Doors coil above the openings; no usable floor, wall or ceiling space needed for either storage or operation. Materials stacked ceiling-high within inches of the door, *inside or outside,* won't hamper door action.

**Out of the Way.** Kinnear Rolling doors clear the entire doorway and *stay out of the way* when open.

**Safe From Damage.** The opened doors are always *out of reach of damage* by either wind or vehicles.

**Convenience.** The smooth, easy upward action of Kinnear Rolling Doors saves time and labor.

**Ideal for Motor Control.** Kinnear's coiling action is also best for highest efficiency in *motorized* doors — meeting today's rapid trend to pushbutton control or full automation at every point.

**Cut Heating, Cooling Costs.** Kinnear Rolling Doors *(especially when motor operated)* promote prompt closing that cuts loss of heat in winter and cooled air in summer.

**Extra Protection.** Kinnear's all-metal curtain is added protection against fire, wind, weather, vandalism.

**Longer Lasting.** Records list many Kinnear Doors in continuous daily use for 40 years or more.

**Lowest Repair Costs.** If accidentally damaged, slats in the door curtain can be replaced individually.

**Extra-heavy Galvanizing.** 1.25 ounces of pure zinc per square foot of metal (ASTM Standards) give the Kinnear curtain highest resistance to corrosion.

Built to fit any opening, with motor or manual control, Kinnear Rolling Doors assure the right answer to your needs. Write for details or recommendations today!

## *Be Sure To Get The Facts On*

# Kinnear Steel Rolling Doors

**KINNEAR**
**ROLLING DOORS**
*Saving Ways in Doorways*

**The KINNEAR Manufacturing Co.** *Offices and Agents in All Principal Cities*

Factories: 1600-20 Fields Ave., Columbus 16, O.; 1742 Yosemite Ave., San Francisco 24, Calif.

DIRECTED BY
Richard Edmonds..1882-1930
Frank Gould .....1930-1943
William Beury ...1943-1955
McKinley Conway..1956

# MANUFACTURERS RECORD
## (IN REVIEW)

"What Enriches The South Enriches The Nation"

SEPTEMBER 1884 (AS ABSTRACTED MORE THAN 70 YEARS LATER) BALTIMORE, MD.

### Southern Trade Prospects

If any of our readers have been disposed to doubt our predictions of a heavy business throughout the Southern States this fall and winter, we would invite their attention to the numerous special reports to the MANUFACTURERS RECORD, published to-day. Notwithstanding the injury to the cotton crop from the long drouth, which fortunately has at last been broken in many parts of the South, the indications all point to a season of great activity and much prosperity. A few months ago the severe stringency in the money market made it impossible for the planters to borrow money as freely as in time past, and it was feared that they would be unable to continue the cultivation of their crops, and that heavy losses would thus be entailed upon them.

### Forced Economy

Instead of this, however their inability to borrow necessitated a forced economy without causing any injury to the crops from the lack of cultivation, and it now is universally admitted that the cotton crop has this year been produced at a lower cost than ever before. Many of our reports make special mention of this, and say that the farmers are less in debt now than for some years, which is one of the most favorable conditions for enlarged trade this season. Moreover, the production of foodstuffs has been greater than ever before, and instead of the South's spending from $175,000,000 to $200,000,000 at the North and West for foodstuffs, as she has heretofore annually done, this amount will this year be reduced probably by fully one-third, and possibly the reduction may be even larger. In industrial matters the prospect is equally cheering, and all indications point to a more rapid development of the material resources of the South this year than last: in fact, during the next twelve months more mills and factories, more foundries and machine shops, and more mining enterprises will probably be started in the South than ever before in the same length of time. Outside capitalists are beginning to appreciate the advantages of the South, and are making liberal investments in all kinds of enterprises —railroad, mining and manufacturing—while the Southern people themselves are doing their full share in helping on the development of their country. The great exhibition at New Orleans will do almost incalculable good for the South, and will result in attracting millions of capital for investment, and many thousands of enterprising immigrants from other parts of this country, as well as from Europe. Looking over the whole field, we feel safe in predicting great activity in the South's industrial interests during 1884-85, with every assurance of a constant and rapid development of all her vast material resources.

### American Exhibition in London

The News and Courier, of Charlestown, S. C., strongly endorses the proposed American Exhibition in London, and urges that South Carolina should be represented at it. As we have said before the plan is apparently a most excellent one, but so far as we have been able to find out, no guarantee has ever been given that it is not simply a speculative scheme, out of which to make money. It will be remembered that about two years ago, there was a Foreign Exhibition in Boston, which, according to report, was very much of a failure, and we believe that the managers of that are to be the managers of this American Fair in London. Before the Southern States decide to spend much money in exhibiting in London, it is to be hoped that they will see if it has the proper backing to make it a success. A first-class exhibition in London of American goods and resources would be undoubtedly a food thing, and we hope that it can be shown that this proposed exhibition will be of this kind.

### National Cotton Exchange Report

The report of the National Cotton Exchange shows that, during the crop-year ending August 31, the consumption of cotton by Southern mills was 339,517 bales, against 313,393 bales last year—an increase of 26,000 bales, despite the severe depression in the cotton goods trade. The consumption in Northern mills for the same two years was 1,537,166 bales in 1883-84 and 1,759,703 bales in 1882-83, a decrease of 220,000 bales. Thus, while the Southern mills made a very material gain, Northern mills lost heavily.

### Cassell's Family Magazine

Cassell's Family Magazine for October is a storehouse of amusement and interesting information. Mr. Harwood's serial, "Within the Clasp," a story of the Yorkshire jet hunters, has reached its fortieth chapter, and gives an exciting situation; and the story of "John Ford" is continued. "A Word About Disinfectants" is apropos of recent cholera scares and well worth reading and acting upon, on the principle that an "ounce of prevention is worth a pound of cure." There is also a suggestive paper about English ships and sailors, showing the growth of the merchant navy during the past thirty years. The Hon. P. Carteret Hill, formerly Premier of the Province of Nova Scotia, gives some more of his impressions of England, as well as of the United States. The art of soup-making is discussed by Lizzie Heritage, and the Rev. A. H. Malan continues his papers on amateur photography—an amusement in great popular favor at the moment. Altogether, Cassell's Family Magazine is so crowded with good things that one marvels that it can be sold for a dollar and a half a year. Cassell & Co. (Limited), New York.

HOOPES & TOWNSEND,
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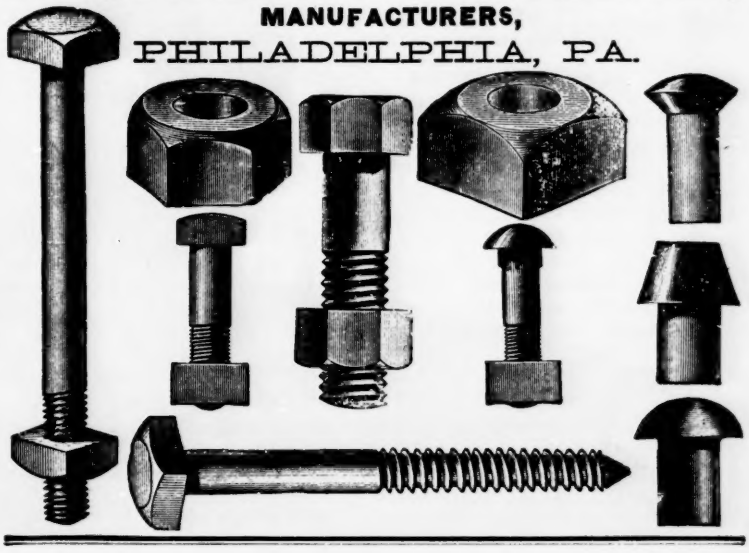

# THE WORD GETS AROUND

## "*Ship Southern*"

**ONE SHIPPER tells another—and a fine reputation for swift, efficient service keeps growing every day. Take the word of experienced traffic men—it pays to ship Southern Railway to, from and within the South.**

**SOUTHERN**
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THE SOUTHERN SR SERVES THE SOUTH

Your freight keeps moving on the modern Southern that serves the modern South

Construction is underway on Chrysler Corporation's Atlanta sales and service training center. Located on a four and one-half acre tract of land on the south expressway, the center will be an air-conditioned two-story, 51,000 square foot building. The structure will include technical training rooms, sales training rooms, and will be equipped with an auditorium and a cafeteria. When in full operation, the center will be able to train 6,000 sales and service personnel annually. The Atlanta facility is the first of four such centers which Chrysler is establishing throughout the nation.

**$8 MILLION PROJECT**

# Huge Expansion Program Ups Eastern Steel's Output

BALTIMORE. — Eastern Stainless Steel Corporation announced here that it has arranged an additional $5 million loan with six banks to aid in financing, when necessary, its anticipated future increase in production and sales.

The company is in the final stages of its $8 million plant expansion program, which includes a new Sendzimir cold rolling mill and extensive supporting equipment as well as a new 30-ton electric arc furnace with an annual capacity of 30,000 tons.

Eastern expects that the enlarged facilities will add some $20 million or more to annual sales based on current prices. Net sales last year amounted to almost $50 million. The new loan funds will be added to working capital to carry anticipated larger inventories and a higher level of accounts receivable.

John M. Curley, president of the Baltimore company, explained that the loan agreement takes the place of an arrangement made with the same banks in September, 1955, when a $4 million term loan due in semi-annual installments to September, 1962, was approved.

The additional $5 million is to be represented by a $1 million term loan to be repaid by the same date and a $4 million revolving credit commitment to continue until June 30, 1950, he said.

Eastern has called for redemption on July 19 all of its previous outstanding 4½ per cent convertible subordinate debentures. Upon completion of this step, the new loan and revolving credit will represent the company's sole outstanding term debt, Mr. Curley said.

# FLORIDA CORP. BUILDING STEEL MILL AT TAMPA

TAMPA.—Construction is to begin immediately on a $2 million electric steel rolling mill in Tampa, it has been announced by the Committee of 100 of the Greater Tampa Chamber of Commerce.

Florida Electric Steel Mill Corporation, new firm building the plant, said the mill is to be completed in about nine months and will employ 80 to 100 persons.

Three Tampa lawyers are the incorporators of the company, representing Florida steel interests. Northern banking interests are said to be supplying capital for the project.

Company officials say locally obtained scrap will be melted by the new electrical process to produce 35,000 tons of reinforcing bars and merchant bars per year.

A "clean and modern" plant will be constructed on a 12 acre site in an industrial section of Tampa near Tampa's waterfront.

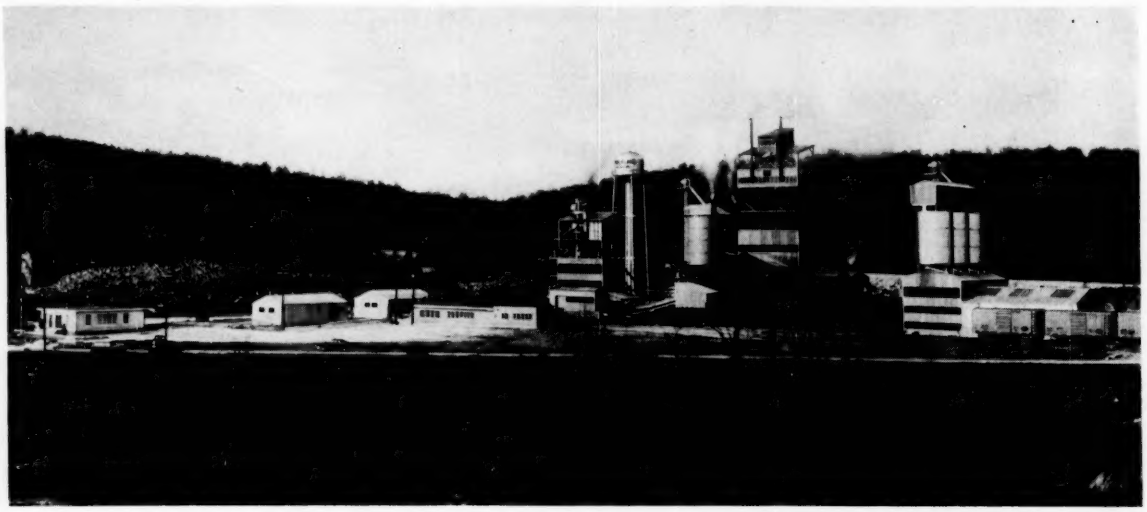
# Pfaudler Company Opens Houston Unit

HOUSTON.—Establishment here of headquarters for a new Southern sales district has been announced by the Pfaudler Company, of Rochester, New York.

H. I. Edwards, general sales manager, said the new district was set up to meet increased demands for the company's products.

The district includes Texas, New Mexico, Louisiana, Mississippi, Alabama, Georgia and Tennessee. Edwards said sales growth in this area had reached the point where it no longer could be handled solely by the home office and the Pfaudler field representatives.

A. G. Anderson, a sales engineer with Pfaudler for the past 20 years, has been named manager of the new district.



The Burnside, Kentucky, wood distillation plant of the Cumberland Corporation, showing, left to right, the plant office building, machine shops and service buildings, green-chip dryer (center), process water towers, "Unisize" green-chip storage silo, Stafford retort towers, and at the far right, briquetted charcoal storage silos and packaging plant. At peak production the Burnside plant will furnish 20 per cent of all briquetted charcoal used in the nation, and will also produce important quantities of furfural solvents for the chemical, petroleum and pharmaceutical industries.

# KENTUCKIANS' PROGRAM AIDS INDUSTRIAL GROWTH

## Owensboro Residents Pledge Goal of $225,000 To Option, Develop, And Purchase Plant Sites

OWENSBORO, KY.—Leading businessmen and residents of Owensboro, seeking new industry with which to continue to grow, have in recent weeks pledged $225,000 to be used to option, develop and purchase desirable industrial plant sites.

A goal of $250,000 has been set by the Owensboro-Daviess County Industrial Foundation. The 125 pledges made through July 1 have been in amounts from $1,000 to $15,000.

Incorporation of the Owensboro-Daviess County Industrial Foundation followed a determination by Community leaders that this Ohio River city of 50,000 possesses those things that are considerations in plant locations. These include a surplus of skilled male labor in the area of which Owensboro is the hub, two four-year liberal arts colleges in the city, and a highly-diversified city-operated technical high school that is ready and willing to train prospective employees in new skills, according to the foundation's president, Thomas G. Bartlett, who also is president of the Owensboro National Bank.

The Owensboro-Daviess County Industrial Foundation now has under option a site consisting of 143 acres located on the Ohio River, a major U. S. highway and a mainline railroad; another of 45 acres and also located on the Ohio River as well as a mainline railway and a hard-surfaced state highway, and a third one of 100 acres, located inland and having all utilities including city water, natural gas, sewer, paved access street and railroad. This latter site is adjacent to a modern General Electric Company plant.

# New Georgia Firm Buys Whittier Mills

CHATTAHOOCHEE, GA. — The business formerly operated by Whittier Mills Company here is now being operated by a new Georgia corporation with the same name.

Officers of the new corporation are J. J. Scott, president; Hansford Sams, Jr., treasurer, and Miss M. Duncan, secretary. President of the old company was Ames Stevens.

Scott, the new president, had been treasurer, director and the active head of Whittier Mills Company for the past 22 years.

The wool and synthetic yarns products of the company will continue to be sold by Ames Textile Corporation of New York. The other products including cotton fabrics and hose cord yarns will be sold direct from the mill.

Officials said there will be no change in the products, operating or sales policy of the new company.

# West Georgia Mills Formed In Atlanta

ATLANTA.—Formation of a new corporation to manufacture braid, cotton yarn, packaged cordage specialties and related products has been announced here by Gibson LaFoy, well-known leader in the South's textile industry. The new company is West Georgia Mills, Inc.

LaFoy, who is president, said the new corporation takes over the business and operations of Virginia Manufacturing Company. There will be no change in operation, service or deliveries.

## DAN RIVER MILLS PLANS NEW UNIT NEAR DANVILLE

DANVILLE, VA.—Plans for construction of a new research and chemical manufacturing plant on a 13-acre tract just outside Danville have been announced by Dan River Mills, Inc.

W. J. Erwin, president of the company, said negotiations have virtually been completed with the Danville Industrial Development Corporation for the purchase of the land.

Tentative plans call for a two-level building with about 50,000 square feet of floor space. The building will be used in part for expansion of the company's long-established research facilities, and in part for the manufacture of various chemicals required in Dan River's manufacturing and finishing operations.

Dr. H. Y. Jennings, director of research for Danville, pointed out that with the space and equipment to be available in the new plant, the company would be able to expand its manufacturing of chemicals to meet increased requirements in both greige manufacturing and finishing.

Concerning location of the new unit, Erwin paid tribute to the Danville Chamber of Commerce and to the Danville Industrial Corporation for their help and cooperation in working out arrangements and making the site available.

## Oklahoma CAA Unit In Huge Expansion

OKLAHOMA CITY.—The second of the seven buildings to be in the new Civil Aeronautics Center here was completed in August.

The entire project, to cost $13 million, is scheduled to be finished by July 1, 1958.

One of the largest buildings under construction is the 650,000 square feet warehouse and shop. It is due for completion the first part of next year.

The CAA center here was opened 10 years ago with 30 personnel. By this time in 1958 it is expected to have about 1,500 employees and a steady complement of between 800 and 1,000 students.

## LATE NEWS HIGHLIGHTS

MIAMI. A $4 million 10 story hotel, to be called "Starways" will be constructed south of the Miami International Airport. The handsome structure was designed by Rader & Associates, and construction is slated to get underway in October.

**JACKSONVILLE. A contract in excess of $2 million for modernizing the 19-year-old pulp and paperboard plant of the Owens-Illinois Glass Company's mill division has been awarded to Merritt-Chapman and Scott Corporation.**

NEW ORLEANS. Gordons Transports, Inc. is completing a $500,000 transportation center here. The center consists of a two-story office wing with drivers' dormitories, a repair shop of 4,500 square feet, and a one-story dock building of 28,700 square feet. Brice Building Company is the builder, and Curtis & Davis, the architects and engineers.

**BAYTOWN, TEXAS. The Consolidated Chemical Industries Division of Stauffer Chemical Company has completed plans to more than double the capacity of its sulfur recovery plant here. Construction is underway, and an early 1958 completion date is set for the new units.**

CHARLOTTE. Standard Chemical Products, Inc. has awarded a contract to the J. A. Jones Construction Company for the construction of additional laboratory facilities at Standard's plant here. Approximate cost will be $100,000.

**CANTON, MISS. The Champion Chemical Corporation has begun operations in its new $200,000 plant here. Champion will manufacture insecticides and fungicides in the new plant.**

KROTZ SPRINGS, LA. Anchor Gas Corporation has begun construction of a $1.5 million natural gas cycling plant near here.

**DECATUR, ALA. A $2 million trailer manufacturing plant is believed assured for Decatur. The plant is to be built by the City of Decatur and Morgan County with the proceeds of a $2 million bond sale, the bonds to be issued under the provisions of the Wallace Act. The plant is to be leased to the Fruehauf Trailer Company, and amortized by that company over a 20-year period. The plant will employ about 350 persons.**

HILLS PARK, GA. The new retarder yards, a joint project of the Nashville, Chattanooga & St. Louis Railway and the Louisville and Nashville Railroad, has been formally opened here. The yard, with freight-house facilities, cost more than $10 million.

**ORLANDO. The first satellite company to follow The Martin Company here is the Richardson Manufacturing Company of Springfield, Ill., subcontractor to many of the nation's big aircraft companies. The company has under construction on a 40 acre tract a 45,000 square foot precision machinery plant which will employ about 60 persons when it is completed in early 1958.**

# simplicity

"IT'S SHORE WONDERFUL... EVEN
COUSIN FOOLEY KIN PUT IT TOGETHER."

**U.S. CAST IRON PIPE**

**FOR WATER, SEWERAGE AND**

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Our new "Tyton Joint" pipe assembles so easily even an inexperienced crew can master the technique quickly.

Only one accessory needed...a specially designed rubber gasket which seats in the bell. The entering pipe slides into place easily, compressing the gasket... making a tight, permanent seal.

No bell holes needed. What's more, "Tyton Joint" doesn't mind wet feet. You can lay it in the rain if need be!

Like to know more about this revolutionary, new pipe joint that saves time and trouble in the trench...and money on your contract?

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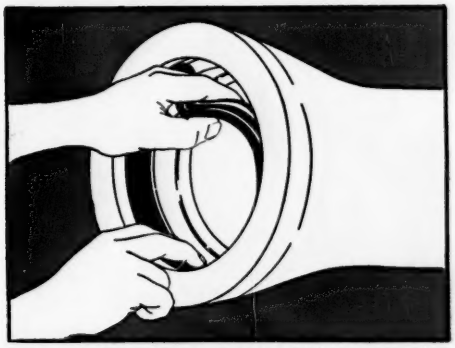
A WHOLLY INTEGRATED PRODUCER FROM MINES AND BLAST FURNACES TO FINISHED PIPE

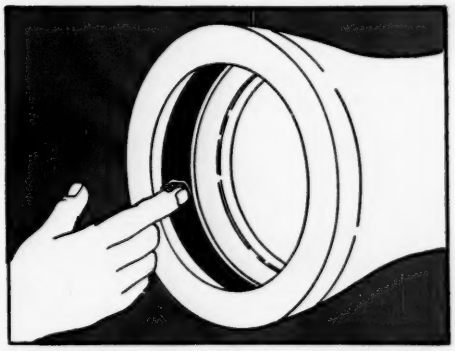
**INDUSTRIAL SERVICE** CAST IRON

## TYTON JOINT

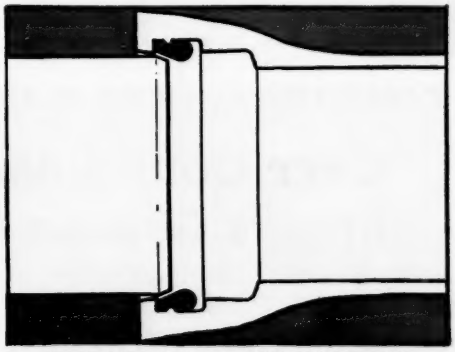
**ONLY FOUR SIMPLE ACTIONS**



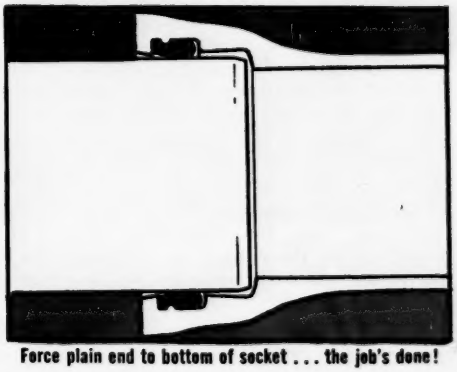
Insert gasket with groove over bead in gasket seat



Wipe a film of special lubricant over inside of gasket



Insert plain end of pipe until it contacts gasket



Force plain end to bottom of socket . . . the job's done!

Valdosta, Georgia ground is broken for the Carr Consolidated Biscuit Company by (left) A. D. Davis, President of Winn-Dixie Stores, Incorporated which owns the Carr firm, and Georgia Governor Marvin Griffin. The Carr bakery moved from Chicago, where it was destroyed by fire in 1955.

### EARLY 1958 OPENING PLANNED

# Carr Consolidated Biscuit Breaks Ground In Valdosta

VALDOSTA, GA.—Ground-breaking ceremonies for the Carr Consolidated Biscuit Company were held recently in Valdosta with Governor Marvin Griffin making the principal address.

A. D. Davis, President of Winn-Dixie Stores, Incorporated, which owns the Carr firm, responded to the welcome issued by the Governor. He praised the efforts made by the Valdosta and Lowndes County Chamber of Commerce in securing the new plant and said "that the cooperation he found among the citizens in Valdosta played an extremely important part in their selecting the city for their industry." Davis is well known throughout the South for his interest in the economic and industrial development of this section. He noted the Governor's work among the industrialists in the North and East in interesting them in Georgia locations, and expressed appreciation for his official interest.

The Carr bakery is moving here from Chicago, where it was destroyed by fire in 1955.

Governor Griffin praised the efforts of all Georgians in bringing industry into the state and stated "that 337 new plants had moved to Georgia during his administration, with a capital investment of $165 million."

John Lastinger, President of the Valdosta and Lowndes County Chamber of Commerce, presided at the Ground-Breaking ceremonies. Other prominent Valdostans on the program included State Senator John Langdale who presented the Governor and Mayor Emory Bass who gave an official welcome to Valdosta's newest industry.

The plant will manufacture the "sweet goods" line, including cookies and crackers, for the 460 Winn-Dixie retail outlets in the nine Southeastern states. It will occupy 75,000 square feet of floor space on a 13-acre tract of land situated on the Georgia & Florida Railroad. It is expected to employ 150 people when operation begins in the early part of 1958.

The D. O. Foshee Construction Company is building the plant and it was designed by Abner C. Hopkins, Architect. Both are Jacksonville concerns.

# Tampa Gets $200,000 Plant

TAMPA.—Westomatic Manufacturing Corp. of Dothan, Alabama, and Citra, Florida, will re-locate its Citra factory and general offices at a new $200,000 Tampa plant, it was announced by Henry Toland, chairman of the Committee of 100 of the Greater Tampa Chamber of Commerce.

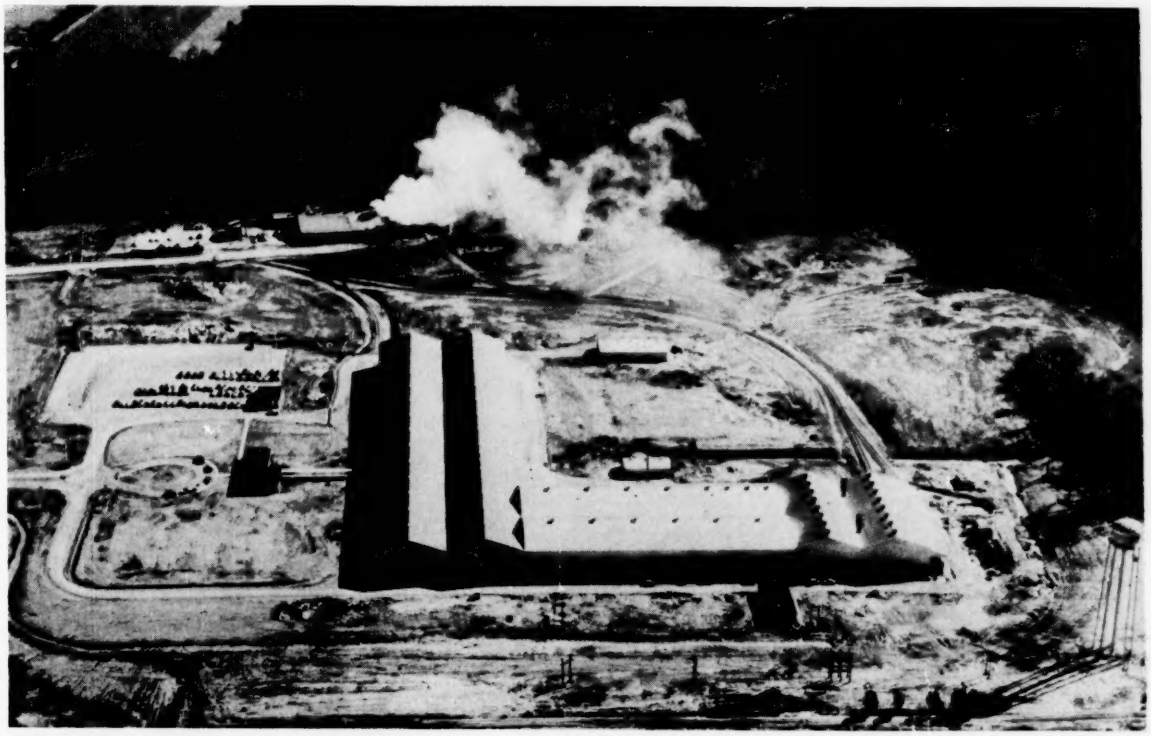
A 16,000 square foot building on a nine-acre site near the Northwest Tampa city limits, is already under construction to house the operation which currently employs 26 persons at Citra. Products of the firm include electric and gas domestic water heaters and fuel oil and hydrostatic tanks.

Simultaneously, the company's Dothan plant is being expanded, according to Westomatic president K. A. Prescher.

Other officers moving to the new Tampa operation are vice-president E. L. Prescher and sales manager C. D. Kitchen.

Output of the Tampa operation will serve the firm's customers in Florida, Georgia, North Carolina and South Carolina. Tank production at Tampa will also serve Alabama.

A Seaboard railroad line serves the plant site on Trask Ave., one-half mile West of Gunn Highway on Mullis City Road.



Built at a cost of $5.5 million, this new Reynolds Metals Company aluminum plant located on the outskirts of Richmond serves customers in the Midwest and along the Eastern Seaboard. The fully integrated plant is designed to process aluminum pig and scrap into finished extrusions. The Richmond plant at full capacity employs approximately 450 persons, and has an annual payroll of an estimated $2.5 million.

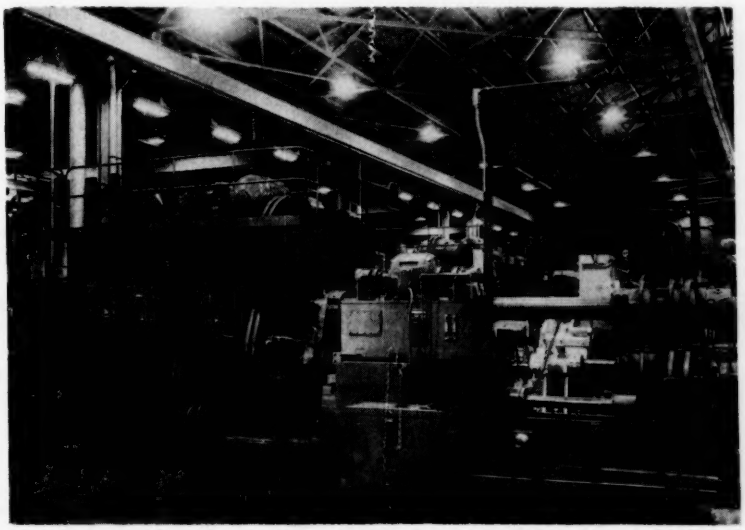
# Reynolds Puts $5 Million Plant Near Richmond

RICHMOND. — A new aluminum fabricating facility, capable of increasing the light metals industry's productive output by as much as two million pounds per month, has been opened by Reynolds Metals Company at its recently completed $5 million extrusion plant.

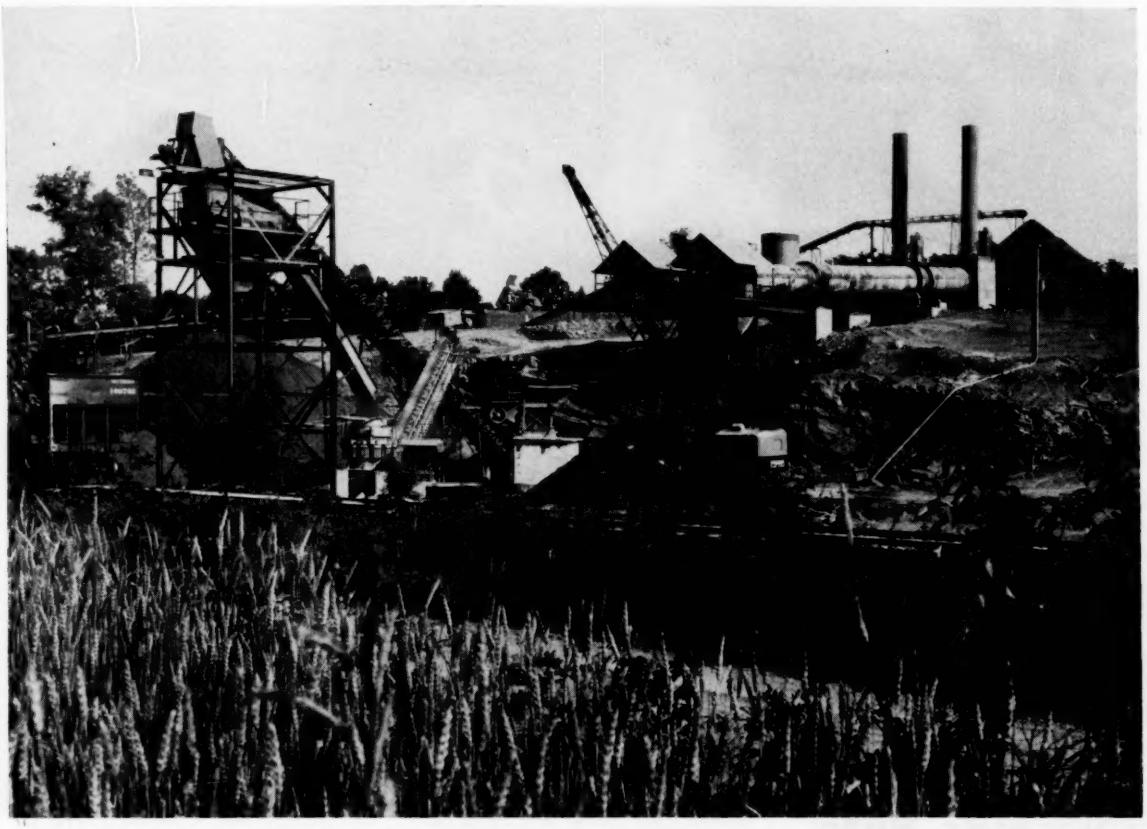
The ABC's of making aluminum extrusions were demonstrated to an estimated 1,500 guests of the plant including employees, their families and residents of the surrounding communities. The modern mill, located at Bellwood —on the outskirts of Richmond, will serve customers in the Midwest and along the Eastern Seaboard.

The Richmond plant at full capacity employs approximately 450 people and has an annual payroll of roughly $2.5 million. One of 53 plants owned and operated by Reynolds and its affiliated and subsidiary companies, the mill and grounds cover 50 acres, six of which are under roof.

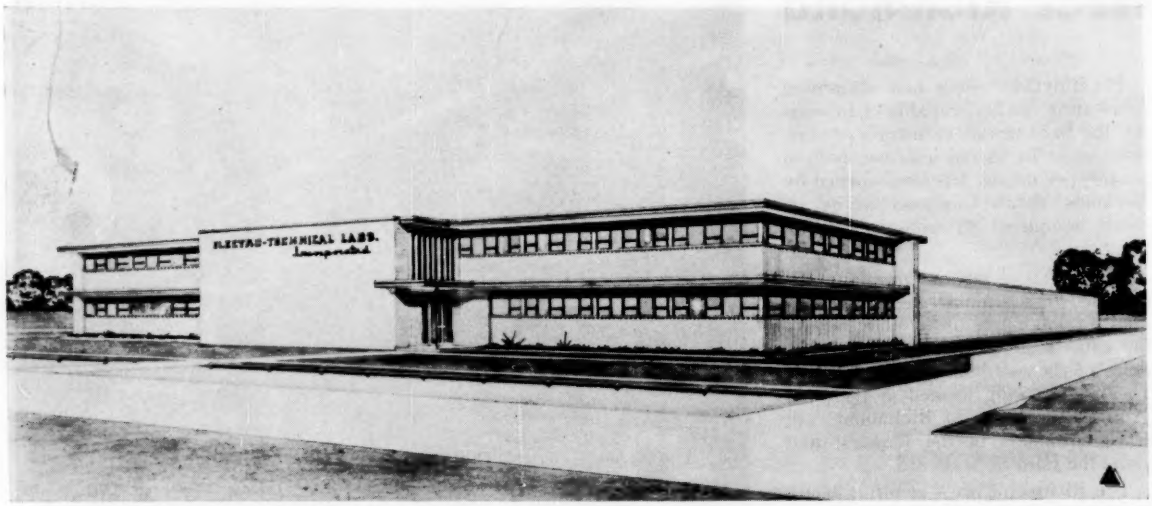
In addition to the new aluminum mill, Richmond is headquarters for Reynolds Metals Company. Reynolds also has a foil plant, smelting plant, packaging plant and two research laboratories in the city.



This 2,300-ton aluminum extrusion press is one of the four used at the new Reynolds plant in Richmond. This plant manufactures parts for storm and prime windows, ladders, chairs, electrical applications, and a variety of products used by other industries.



This new plant of Southern Lightweight Aggregate Company is a recent addition to the chain of Solite facilities. This plant is located at Leaksville Junction, on the North Carolina and Virginia State line, and operates a 24 hour day, seven days a week. Huge twin kilns, 135 feet long, are pictured in the foreground.




Pictured is the new $500,000 Electro-Technical Labs Building located in Houston, Texas. All engineering and administrative offices are on the second floor, and the mechanical engineering area has space provided for a machine shop, called the "model shop." Among special features of the building are such items as overhead cranes, a walk-in fireproof vault, a centrally located stock room, and a receiving area to the rear.

# AEC EXTENDS NUCLEAR PACT WITH INSTITUTE

OAK RIDGE.—S. R. Sapirie, Manager of the Atomic Energy Commission's Oak Ridge Operations, has announced a five-year extension of the contract with the Oak Ridge Institute of Nuclear Studies for administration of Commission programs of research and education.

The Institute, a non-profit educational corporation of thirty-five southern universities, has been an operating contractor for the Commission since March 18, 1947. The new contract extends through June 30, 1962.

The Institute's programs for the Commission embrace special training in the field of radioisotopes, medical research in relation to the use of radiation and radioactive elements, administration of fellowships and other special educational programs, and an atomic energy exhibits program.

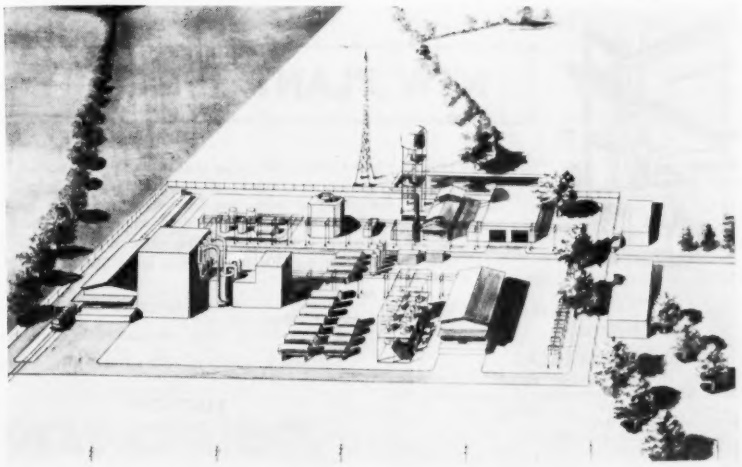
The Institute's Special Training Division presents basic courses in the techniques of safe and efficient use of radioisotopes in research, veterinary radiological health courses for military personnel, and other special courses involving radioisotopes in specialized fields of medicine, biochemistry and industry. More than 3,000 scientists of mature research personnel from every state and forty-five foreign countries have participated in the various courses.

# Florida East Coast Railway Buys Land

MIAMI.—Completion of the sale of 115 acres of land west of Miami's International Airport to the Florida East Coast Railway in an all-cash transaction of $1,070,872 was announced by Peter T. Craven, senior vice-president and treasurer of Riddle Airlines.

The railroad has said that it will use the land to provide sites for Greater Miami's rapidly growing industries which require carload rail facilities.

The site is part of 795 acres which Riddle Airlines acquired in 1955 in anticipation of the rapid industrial growth of the area because of its proximity to rail, ground and air transportation facilities.



An architect's sketch shows the new plant of the Naugatuck Chemical Division of the United States Rubber Company under construction in the Scotts Bluff area near Baton Rouge. The facility, to cost more than $7 million, is expected to be completed in December.

## DECEMBER COMPLETION SLATED

# $7 Million Chemical Facility Being Built By U.S. Rubber

BATON ROUGE.—Construction is in progress on a new chemical plant for the Naugatuck Chemical division of United States Rubber Company in the Scotts Bluff area near here. Completion is scheduled for December.

On a site of 150 acres, the plant will require a total investment of more than $7 million. It will be used to make Kralastic plastic materials employed in pipe, automotive parts and many industrial products.

George R. Vila, vice president and general manager of Naugatuck Chemical, said the new plant will triple the division's production capacity for Kralastic. It also will give the company capacity to make more than 60 million pounds of plastic and synthetic rubber yearly in Baton Rouge.

Beginning of construction on this plant came on the heels of the completion this past Spring of an expansion program by Naugatuck here for the production of Paracril, an oil-resistant synthetic rubber. This expansion, which raised production by 60 per cent, cost $2 million.

The Paracril increase was accomplished by adding new equipment and modifying existing units at the Baton Rouge plant.

The new Kralastic plant is expected to employ about 125 persons. It will have several buildings, including production, laboratory and office units.

J. Scott Brown, factory manager of the present plant here, will also manage the new facility.

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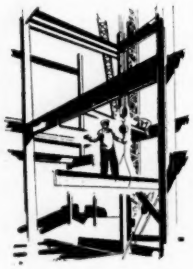

# NEW PLANT SUMMARY

**The following is a summary of major industrial plants reported to the RECORD during the month of July, 1957. This information has been checked with the Southern Association of Science and Industry and various state development agencies.**

**Number of employees is indicated by the code: A (under 25); B (25-100); C (100-250); D (250-1000); and E (over 1000).**

### ALABAMA

No plants reported.

### ARKANSAS

Little Rock—Hoerner Boxes, Inc., corrugated boxes. In operation. $1.75 million. (C)

Little Rock—W. A. Smith Co., W. A. Smith, Pres. paints.

Rogers—Southwestern Bell Telephone Co. plans new plant to house new dial system and toll system. $1.5 million.

### FLORIDA

Bradenton—Southern Steel Products Co., 1107 8th Ave., E. Jas. Levins, Partner. Under construction.

Clearwater—Marshall Street Sewage Treatment Plant. $673,775.

Dunedin—Lockheed Aircraft Corp., Ga. Div. Florida Engineering. C. E. Farrar, Mgr., aeronautical engineering. (D)

Hialeah—Arch Gear Works, Inc., precision gear work. Home office: North Quincy, Mass. Oper. est. to begin Oct., 1957.

Jacksonville—Quay Industries, 2135 Riverside Ave., William Quay, Pres. wire rope splicers.

Lakeland—Laurie-Massey Citrus Products, Inc., P. O. Box 398, F. M. Massey, Sr., President, concentrated orange juice. (B)

Miami—Airtronics Engineering, Inc., 350 N. E. 75th St., H. Edlund, Pres. Metal spinning, precision machining, metal fabrication, heliarc welding, tools, dies, jigs, fixtures. (C)

North Myers—Lynch Electronics & Nucleonics Service Corp., Inc., A. H. Lynch, Pres. Laboratory to calibrate and repair electronic and nucleonic testing instruments. Oper. began Sept. 1, 1957.

Ocala — Pacemaker Trailer Co., Taylor Field, E. S. Platt, Gen. Mgr. Mobile homes. (B)

Ojus — Atlantic Wire Co., welded wire fabric. Home office: Brandford, Conn. Oper. began Sept., 1957.

Orlando—Richardson Mfg. Co., L. F. Richardson, Pres. Precision machinery. Home office: Springfield, Ill. Const. est. to be completed Jan., 1958. (B)

St. Petersburg—Industrial Services Laboratories, Inc., metallurgical test facilities.

Shamrock—Continental Turpentine & Rosin Corp., P. O. Box 130, F. M. Kressman, Jr., Vice Pres. FF wood rosin; steam distillated wood turpentine, pine oil, dipentene. (C)

Tampa—Anheuser-Busch, Inc., August A. Busch, Pres. Brewery. Home office: St. Louis. Const. est. to begin late 1957. $20 million. (E)

Tampa—Florida Electric Steel Mill Corp., rolling mill. Oper. est. to begin spring, 1958. $2 million. (C)

Tampa — Westomatic Mfg. Corp., K. A. Prescher, Pres. Electric and gas domestic water heaters; fuel oil, hydrostatic tanks. $200,000. Firm moving from Citra, Fla.

### GEORGIA

Alma—Georgia Coastal Natural Gas Corp., natural gas pipeline system. $10 million.

Americus — Marlette Coach Co., house trailers. Home office: Marlette, Mich. Under construction.

Atlanta—International Shoe Co., distribution center. (C)

Atlanta—Owens-Illinois Glass Co., glass.

Atlanta—West Georgia Mills, Inc., Gibson LaFoy, Pres. Braid, cotton yarn, packaged cordage specialities. In operation.

Augusta — Marks Oxygen Co., Pierce E. Marks, Sr., Pres., liquid oxygen. $1 million.

Camilla—Wilk Shirt Corp., shirts. Home office: New York.

Chipley—Dacula Sportswear, Inc., jackets. (B)

Macon — Yancey Brothers Co., tractors. Home office: Atlanta.

Perry—Perry Mfg. Co., sewing industry. (C)

Savannah—Southeastern Refineries, Inc., asphalt refinery. $3 million.

### KENTUCKY

Bowling Green—Louisville Bedding Company of Bowling Green, mattresses. Const. est. to be completed summer, 1958.

Burnside—Cumberland Corp., wood distillation plant, briquetted charcoal.

Danville—Cincinnati Milling Machine Co., manufacturer of machine tools, has purchased a 76-acre industrial tract.

Franklin—Potter — Brumfield, Inc. has purchased 21 acre site. Subs. of American Machine & Foundry Co.

Georgetown—Hydro-Plastic Co., U. S. Hwy. 25, plastic molding plant. Home office: Plattsburg, N. Y. Const. began July, 1957. (B)

Henderson — Spencer Chemical Co., Kenneth A. Spencer, Pres. Urea plant. Const. est. to be completed summer, 1958.

Maytown—Kentucky Hydrocarbon Co., gas concentrates. Subs. of Kentucky and West Virginia Gas Co. Oper. began July, 1957.

Nicholasville—Dalton & Densler Co., W. Oak St., tool and die firm. Home office: Eau Claire, Wisc. (B)

## LOUISIANA REPORTER

Curt Siegelin, Executive Director of the Louisiana Department of Commerce, Baton Rouge. Not pictured is Hugh Bowers, Director of the Industrial Promotion Division of the Chamber of Commerce of the New Orleans Area.

### LOUISIANA

Bastrop — Tidewater Equipment Company of Louisiana, Inc., ladders, trailers, pallets, skis. $7,511.

Handsboro—Mississippi Power Co., L. P. Sweatt, Pres. Steam generating plant. $14 million.

Mandeville — Great American Dispensing Service, Inc., Charles J. Commander II, Pres. Non-mechanical equipment to sell coffee in office building, etc.

New Orleans—Wembley, Inc., Samuel C. Pulitzer, Pres. Men's ties. $1 million.

New Orelans—White Nipple & Machine Co., pipe nipples, other fittings. $57,500.

Opelousas — Opelousas Oil refinery has leased a coconut oil bulk terminal, $125,000.

Wisner—G & W Co-Op, cotton gin. $155,000.

### MARYLAND

Anne Arundel County—Raleigh Manufacturers, Inc. $300,000.

Baltimore—Baltimore Gas and Electric Co. plans to build a $42.5 million steam-electric generating station on a 138-acre tract on Carroll Island Rd. Oper. est. to begin early, 1961.

Baltimore—Lens Corporation of America, 4902 Snader Ave., Allen Lee, Pres. Lens grinding.

Sparks—Diecraft, Inc., Harry A. Dundore, Pres. Precision components and assemblies. Home office: Baltimore. Oper. est. to begin April, 1958. $1 million. (D)

Towson — Esso Standard Oil, electronic data-processing center.

### MISSISSIPPI

Brookhaven—Standard Wire Cloth Co. In operation.

Canton—Champion Chemical Corp., insecticides and fungicides. Oper. began August, 1957. $200,000.

Durant—Talon, Inc., D. H. Wells, Mgr., zippers. Oper. est. to begin Dec., 1957. (B)

Magnolia—Movie Star, Inc., lingerie. $133,000.

McComb—Croft Steel Co., steel products plant. (C)

Rolling Fork—Kona Textiles Corp., woven and braided elastic narrow fabrics. Subs. of Columbia Narrow Fabrics Co. In operation. (C)

### NORTH CAROLINA

Charlotte—Burwell & Dunn Co., office and warehouse. Branch of McKesson & Robbins, Inc. $1 million.

Gastonia—Friday Textile Machine & Supply Co., replacement parts for textile machinery. (B)

Greensboro—Carolina Chemical Compounding Corp., textile and chemical products.

Shelby—Dicey Fabrics, Inc., textile woven fabrics. (C)

Wilmington—American Bitumuls & Asphalt Co., road asphalt and paving materials. Subs. of Standard Oil Company of California.

### OKLAHOMA

Hollis—Jourlex Co., Abe Frydlan, Pres. Leather goods.

El Reno—Cheyenne Mobile Homes, Inc., James Bailey, Pres. Mobile trailer homes. Oper. began August, 1957.

Seminole—Allen Manufacturing Co., Carl Whitson, Pres. Scrap metal baling presses. Oper. began August, 1957.

### SOUTH CAROLINA

No plants reported.

### TENNESSEE

Brownsville — American Kleer-Vu Plastic Corp., wallet inserts, ticket holders, pass cards. Oper. est. to begin Jan., 1958. (C)

Dickson — Wizard Boats, Inc., fiberglass boats. Home office: Costa Mesa, Calif. (C)

Johnson City—Mayes Brothers Tool Manufacturing Co., Dan Mayes, Pres. Carpenter levels, aluminum ladders, cement and plasterer tools. (C)

Mount Pleasant—Victor Chemical Works, organic chemicals. Oper. est. to begin late fall, 1957. (B)

### TEXAS

Bryan—Albritton Engineering Corp., aluminum windows. (C)

Dallas — Dow Chemical Co., Donald P.

# MARYLAND REPORTER

I. Alvin Pasarew, Director of the Maryland State Planning Commission, Baltimore.

Camp. Mgr. Sales office.

Fort Worth—Big Three Welding Supply Co., argon liquid oxygen. Const. est. to be completed January, 1958. $1.5 million.

Fort Worth—U. S. Chemical Milling Corp. has purchased a 20 acre site for a metal parts plant. Home office: Los Angeles. $1.5 million.

Orange—Acheson Dispersed Pigments Co., Morgan Jones, Plant Mgr. Home office: Philadelphia.

### VIRGINIA

Petersburg—Glasspar Co., Roslyn Farms, L. J. Neiger, Pres. Fiberglass boats. Home office: Santa Ana, Calif. Oper. est. to begin fall, 1957. (B)

Richmond—Flight Research, Inc., $300,000.

### WEST VIRGINIA

Clarington — Olin Mathieson Chemical Corp., chemical plant. $231 million.

Elkins—Northeastern Manufacturing Company. Under construction.

Huntington—Acme Machinery Co., Arthur P. Perwinger, Pres. Equipment for drilling, coal mine roof bolts, and bolt installation. Home office: Williamson, W. Va. Oper. est. to begin late, 1957. (D)

Huntington—The Darling Shops, 917 Third Ave., women's and children's apparel.

Wellsburg—Pittsburg and West Virginia Railway, rail river terminal along Ohio River.

# MEAD CHANGES NAME OF ITS ATLANTA PLANT

ATLANTA.—The Mead Corporation of Dayton, Ohio, has unified its box manufacturing and marketing operations, and has changed the names of its wholly owned subsidiaries. The Atlanta Paper Company is now the Mead-Atlanta Paper Company, and The Jackson Box Company of Cincinnati is Mead Containers, Inc.

Mead-Atlanta Paper Company unites the names of two very old established names in the paper industry. The affiliation of the two companies was completed earlier this year. Mead-Atlanta has a corrugated box plant, a carton plant and its own machinery division at Atlanta; warehouses at Atlanta, Chicago, Dallas, Los Angeles, Portland, Oregon, Salt Lake City, and St. Paul, and sales offices in 28 cities.

Mead Containers, Inc., will unify the management and sales of the box manufacturing plants of The Jackson Box Company in Cincinnati, Ohio and Durham, North Carolina; Jackson's Industrial Division (formerly Industrial Container & Paper Corp.) at Chicago and the Palm Container Corporation at Miami, Florida. Sales offices are located at Chicago, Cincinnati, Detroit, Durham, and Miami.

Mead has established a national sales office for Mead Containers, Inc., and Mead-Atlanta Paper Company in New York (230 Park Avenue). Virgil Shutze, Vice President in charge of Sales, Mead-Atlanta Paper Company, is in charge of the New York office.

Corrugated shipping containers produced by both Mead Containers and Mead-Atlanta will carry the new "Mead Containers" trade-mark.

"We Know We Can Rely on Connors for

**Highest Quality and Excellent Service"**

**Says Builder of Hurrycane Harvester**

Because they require first-class workmanship, prompt deliveries, and close tolerances, the Thomson Machinery Company of Thibodaux, Louisiana, calls on *Connors* for *Cold Finished Bars* as well as *Merchant Bars.*

The Hurrycane Harvester was developed by Thomson Machinery to cut, top and elevate sugar cane into rows ready for mechanical loading.

Connors Steel, the South's first and only integrated producer of Cold Finished Bars, invites your inquiries and orders. For the finest quality Cold Finished Bars that can be produced anywhere, call, wire, or write: Connors Steel Division, H. K. Porter Company, Inc., P. O. Box 2562, Birmingham, Alabama.

**CONNORS STEEL DIVISION**

**H. K. PORTER COMPANY, INC.**

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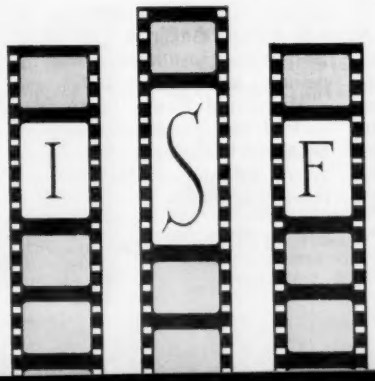



**CONWAY BUILDING**

**N. ATLANTA 19, GA.**

This new $14 million Gulf Coast Power plant at Biloxi is the third generating plant completed by Mississippi Power Company since 1945. The three plants provide a total of more than 300,000 horsepower of generating capacity.

# $14 MILLION POWER UNIT OPENED ON GULF COAST

## Mississippi Power's Newest Generating Plant At Biloxi Has Capacity of 100,000 Horsepower

BILOXI.—The new $14 million Gulf Coast plant of Mississippi Power Company, located midway between here and Gulfport, is now in full operation.

L. P. Sweatt, president of Mississippi Power, said the new facility is the third modern generating plant the company has completed since early in 1945, the three providing a total of more than 300,000 horsepower of additional generating capacity.

This marks, he added, the completion of more than two years of intensive construction work plus another year or more of preparatory planning and design work. The Gulf Coast unit has a generating capacity of 100,000 horsepower.

Sweatt characterized the plant as "concrete evidence of the faith we have in Mississippi's continuing economic progress."

Although the plant is now in commercial operation, it was noted, a considerable amount of construction will be necessary during the next several months in order to complete it. This will include finishing floors and interior walls, insulation, clean-up and painting among other things.

Mississippi Power is an operating unit of the integrated system of The Southern Company. Others in the group are Georgia, Alabama and Gulf Power companies.

# NEW PRODUCTS DIVISION BEGUN BY J. B. BEAIRD

SHREVEPORT.—The J. B. Beaird Company, Inc., here has announced creation of a new product research and development division.

J. Pat Beaird, president, said the move is "one of the most important steps ever undertaken by the company to insure its stability and growth." He added that the new division will seek to develop new products for manufacture by Beaird, as well as to uncover new and extended markets for present products.

Primary effort, he continued, will be directed to the development of products in the oil, gas and petrochemical fields where Beaird has already been identified as a leading manufacturer.

In addition to its search for new products, the division will also conduct market research through long range studies of market potentials, both for present products and new manufactured items that may be undertaken as a result of the division's recommendations.

John MacKinnon, an experienced market research and development analyst, has been named director of the new division.

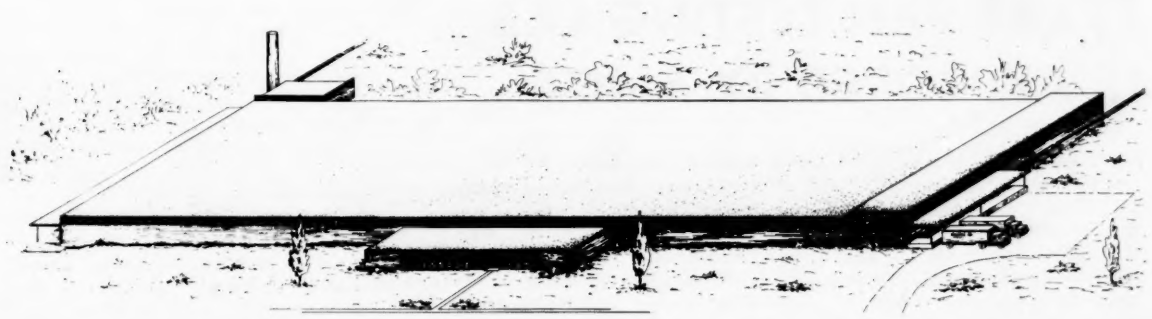
# C & S BANK OPENS GREENVILLE UNIT

GREENVILLE, S. C.—An office has been opened here by the Citizens & Southern National Bank of South Carolina.

The office currently is in temporary quarters, but plans are underway for the acquisition of a permanent location where ultra-modern banking facilities will be constructed.

William C. Coleman, vice president of the C&S, is in charge of the new office here.

The Citizens & Southern National Bank of South Carolina has offices, in addition to the one here, in Charleston, Columbia, Greenville, Spartanburg and Inman. With total resources of more than $100 million, the C&S ranks as one of the largest banks in South Carolina.



Above is pictured an architect's sketch of Trane Company's first Southern plant. To be located in Clarksville, Tennessee, the new plant will cost an estimated $2 million, and, at full capacity, will employ 300 persons. The facility will manufacture central residential air conditioners for year around heating and cooling, and production is scheduled to get underway next year.

***YEAR 'ROUND AIR CONDITIONERS***

# Trane Co.'s $2 Million Facility To Employ 300 In Tennessee

CLARKSVILLE, TENN. — Production is scheduled to get underway sometime next year at the new Trane Company plant project here.

To cost some $2 million, the plant will manufacture central residential air conditioners for year around heating and cooling. This marks the entry into a new segment of air conditioning for Trane.

The first unit of the plant here, to be built on 101 acres of land about four miles northeast of the city, will encompass about 130,000 square feet. When operating at capacity, according to Trane President D. C. Minard, it should provide employment for some 300 persons.

While present plans call for the Clarksville operation to manufacture residential air conditioning units, Minard added, there is a possibility that other related products may be produced here at some later date.

The Trane firm, which produces air conditioning, heating, ventilating and special heat transfer equipment, has headquarters and main manufacturing facilities at La Crosse, Wisconsin. Plants are at Scranton, Pennsylvania and Toronto, Canada. The Clarksville operation will be the first Southern plant.

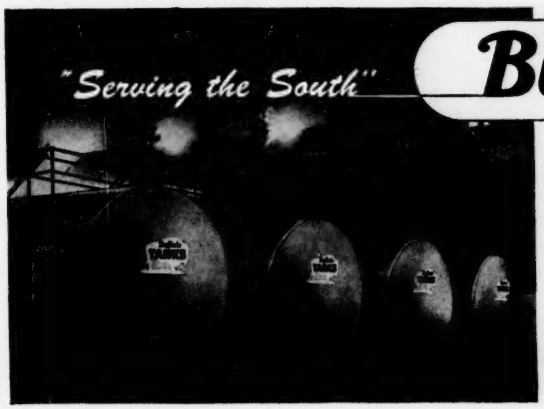
The company has 93 sales offices in the United States and 19 in Canada.

## Piedmont Airlines has 1957 Passenger Gains

WINSTON-SALEM, N. C. — Piedmont Airlines flew 204,565 passengers in the first six months of 1957—an increase of 6.4 per cent over the 192,126 passengers flown in the same period last year, W. G. McGee, of Winston-Salem, Piedmont General Sales Manager, has reported.

Piedmont also showed a 6.41 per cent gain in revenue passenger miles flown in the first half of 1957 as compared with the first half of 1956, Mr. McGee said. Six months total in 1957 was 38,606,088 revenue passenger miles while in the same first half period last year the total was 36,281,276 revenue passenger miles, the airline executive explained.

Piedmont Airlines, which serves seven states and the District of Columbia, currently operates a fleet of 21 DC-3 Pacemakers over a 3,507 mile route.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# TEXAS FAN TESTING LAB IS APPROVED BY AMCA

COLLEGE STATION, TEXAS.—The fan testing laboratory operated by the Texas Engineering Experiment Station, an activity of the Texas A. & M. College System, is the first to be approved by the Air Moving and Conditioning Association (AMCA) as a qualified neutral laboratory for testing centrifugal fans in accordance with the Association's Standard Test Code and Laboratory Standards.

Use of this laboratory's facilities will be recommended to AMCA member companies which manufacture centrifugal fans.

Association approval was granted following an inspection made during actual tests of a special centrifugal fan. Laboratory test equipment; test set-up; calibration of instruments; conduct and results of tests met all requirements of the AMCA Standards.

The Laboratory has been in operation since 1939 for research and development of mechanical air moving equipment. Centrifugal fans up to and including a double width, double inlet type with a discharge duct diameter of 50 inches may be tested here.

Headquarters of the Air Moving and Conditioning Association are at 2159 Guardian Building, Detroit 26, Michigan.

## Carolina Yarn, Inc., Buys Property Of N. Carolina Firm

TRYON, N. C.—The Carolina Yarn Processors, Inc., a newly-formed company, has purchased the real estate and plant here formerly occupied by the Southern Mercerizing Company.

The announcement of the purchase was made by R. L. Huffines, Jr., chairman of the board of Frank G. Binswanger, Inc., Southern Division, nationally known firm of industrial realtors. The Charlotte office of Binswanger handled the transaction.

The new company will engage in dyeing, bleaching, glazing and winding of all natural and synthetic yarns for all segments of the textile and related industries.

Property purchased by Carolina Yarn Processors consists of a modern industrial structure containing approximately 48,000 square feet of floor space. It is on a site of fifteen and a half acres.

Officials complimented the North Carolina State Department of Conservation and Development for its assistance in aiding to locate the new enterprise and for its current efforts to locate managerial employees for the new corporation.

Thackston & Redding, of Spartanburg, S. C., represented the sellers. Southern Mercerizing Company, in the transaction.

## American Creosote Buys Florida Firm

NEW ORLEANS.—American Creosote Works, Inc. has announced the purchase of the plant, equipment, and inventory of the Pensacola Creosoting Company of Pensacola.

Jack C. Ham, formerly Vice President of Pensacola Creosoting, has been appointed Vice President of American Creosote Works. He will manage the new facility, which will be known as the Pensacola Creosoting Division of American Creosote. This addition brings to five the number of new plants operated by American Creosote Works. Other plants are at New Orleans and Winnifield, La., Louisville, Mississippi, and Jackson, Tennessee.

American Creosote Works, Inc. was founded in 1901. Today, the company distributes its manufactured items in nearly all of the 48 states, Canada, Mexico, the West Indies, Central and South America and several countries of Europe, Asia and Africa. American Creosote also sells creosote oil of English and Belgian manufacture. The company produces pressure treated poles, piling, timbers, railroad ties, crossarms and fence posts. It treats these products with creosote, creosote-coal tar solutions, pentachlorophenol and copperized chromated zinc chloride.

Obsolescence
comes to all machines despite all efforts to "make do." But making an old machine "do" will sooner or later cut into the profits not just by higher maintenance, but by missing the greater accuracy, higher speed and general superiority of the latest equipment. Your competition could put in the modern equipment first. West Engineering's Design and Building experts can show you ways of beating obsolescence at less cost than you may expect.
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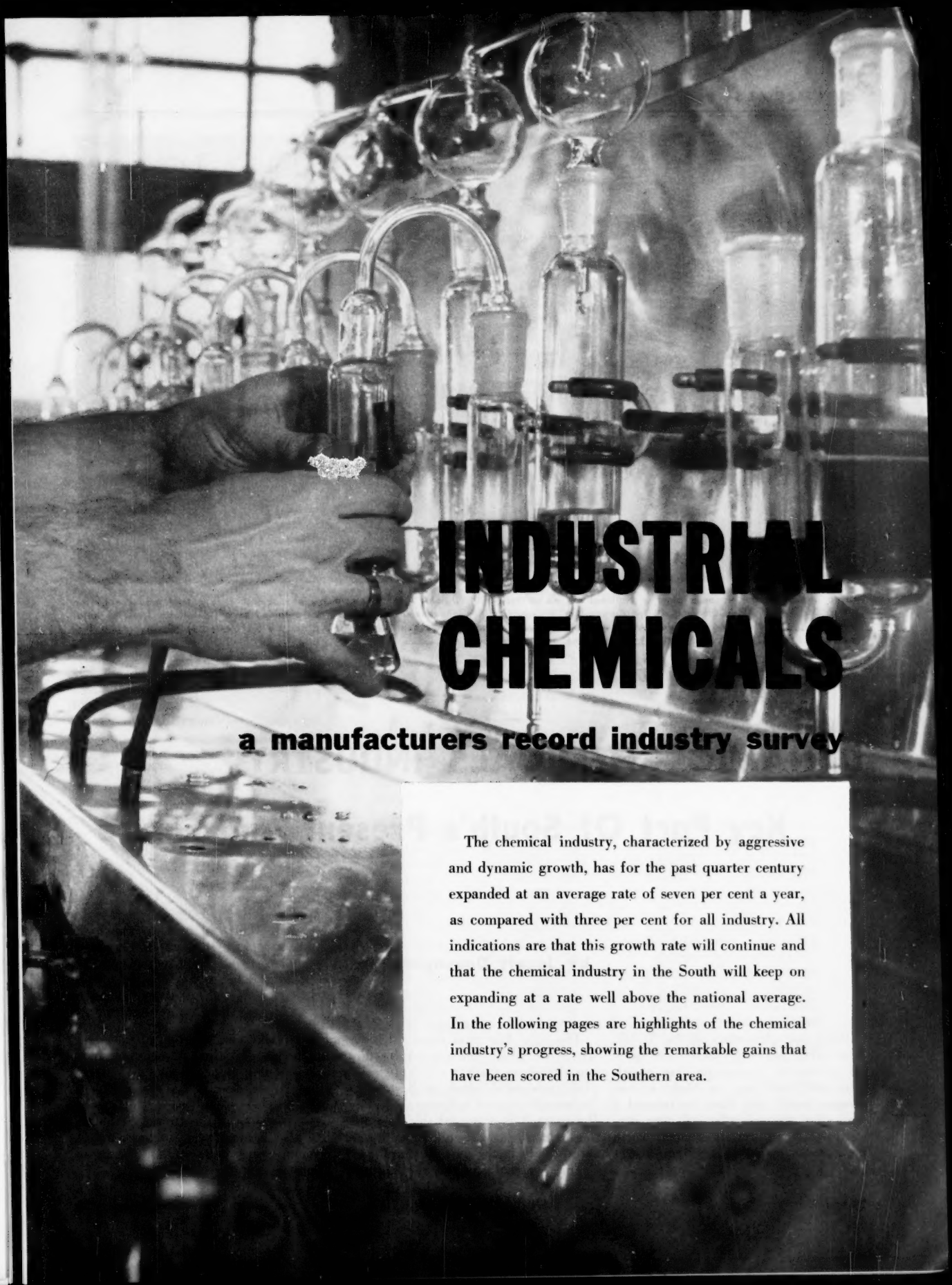
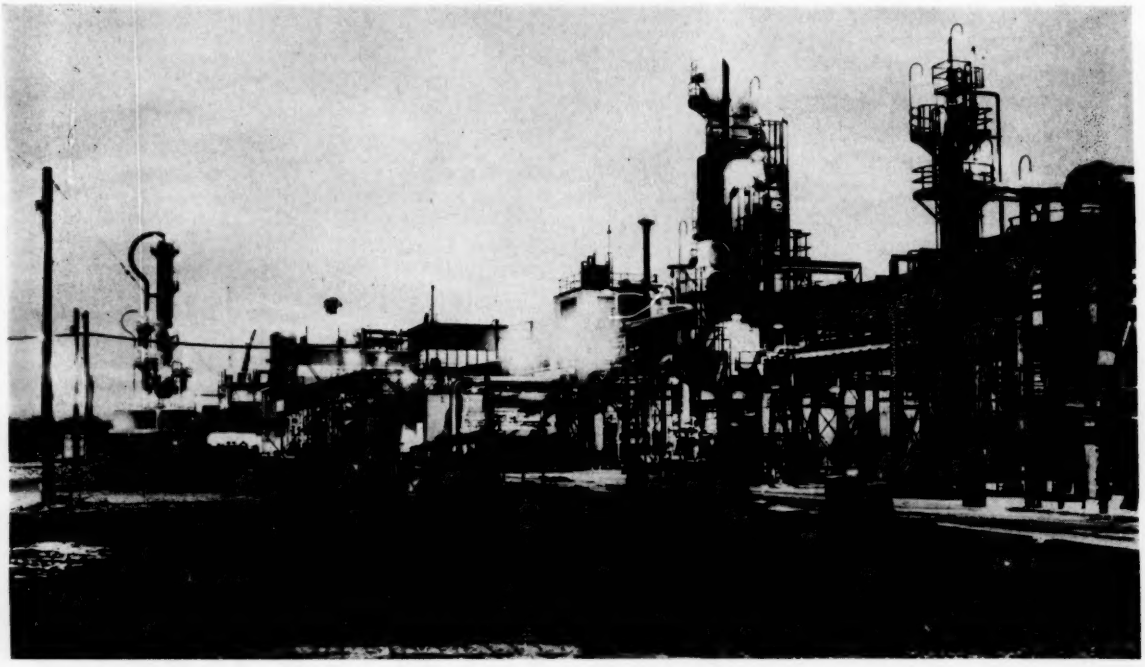


# INDUSTRIAL CHEMICALS

## a manufacturers record industry survey

The chemical industry, characterized by aggressive and dynamic growth, has for the past quarter century expanded at an average rate of seven per cent a year, as compared with three per cent for all industry. All indications are that this growth rate will continue and that the chemical industry in the South will keep on expanding at a rate well above the national average. In the following pages are highlights of the chemical industry's progress, showing the remarkable gains that have been scored in the Southern area.



Above is pictured the monomer plant of National Aniline at Hopewell, Virginia, looking toward the phenol end. Here phenol produced by the Barrett Division of Allied Chemical & Dye Corporation, is reduced to cyclohexanome by synthesis gas obtained by a side stream from the adjacent plant of Allied's Nitrogen Division. At the same time, ammonia from the Nitrogen Division, sulfur, and air are reacted to form hydroxylamine. These are reacted together, producing cyclohexanome and caprolactam.

# DYNAMIC CHEMICALS INDUSTRY:

## Key Part Of South's Present And Future

**by Jouett Davenport, Jr.**

When the alchemists of the Middle Ages were pursuing their vain quest for a way to transmute base metals into gold, not even in their wildest dreams could they have envisioned a day when the miracles of chemistry would result in myriad products worth far more to man than gold could ever be.

The huge American chemical industry, from which these products flow, actually dates back to 1635 when a plant was established at Boston for the manufacture of saltpeter and alum. However, it is a remarkable fact that the industry has risen to its present stature only in the past 40 years.

The current Chemical Industry Facts Book, a publication of the Manufacturing Chemists' Association, Inc., observes that it has been particularly since World War II that the chemical industry has established itself as a basic industry in the United States. It has also become basic to the nation's economy and defense, and basic to almost every other industry.

It has been since the war, too, that the South has risen to a place of pre-eminence as a chemical producing area.

Back in 1939, the "big five" in national manufacturing were food, primary metals, transport equipment, textiles and chemicals, in the order of their value of output.

That same year the "big five" in the South were food, textiles, petroleum-coal products, tobacco and chemicals.

By 1956, in the national picture food still ranked first and chemicals fifth, but in the South big changes had taken place. Food, as in the nation as a whole, held first place, but chemicals in the region had jumped from fifth to second place. In third, fourth and fifth places were petroleum-coal, textiles and primary metals, while tobacco had moved to sixth place.

### Output Rises

Other illustrative figures show that prior to World War II, output of chemicals in the South never exceeded a billion dollars in value. However, by 1956, value of Southern output had increased to a point close to $8 billion, showing a gain of more than 700 per cent. At the same time, the national average of output gain was less than 500 per cent.

Since chemistry deals with the changing, in various ways, of virtually all natural substances, it is an industry of almost limitless possibilities. It also is an industry of many stages, as the transformation from raw material to finished product generally involves many processes, as well as value added by a number of manufacturing plants.

Chemicals, generally speaking, may be divided into two major groups. those regarded as industrial or preliminary products and those that are consumer or finished products.

Gains in the South have been noteworthy in both fields, but because the region is rich in prime raw materials, its outstanding advances in chemical production have been in industrial chemicals.

By official classification, the two main groups of industrial chemicals are inorganic and organic. Included in the inorganics are sulphuric acid, alkalies and chlorine and many other similar basic substances. Among the organics are coal tar crudes, color materials, plastic materials, synthetic rubber, synthetic fibers, explosives and miscellaneous others.

Nationally, 72 per cent of industrial chemicals produced are in the organic group, while the remainder are the inorganics. In the South the percentages are 75 and 25 per cent, respectively.

In the 1947-54 period, output of plastic materials in the South gained by 300 per cent, while a gain of 78 per cent was shown in the same census period by synthetics, rubber and fibers.

Other figures show that the South produces 39 per cent of all the chemicals made in the nation, and in industrial chemicals the region produces 51 per cent of the national total.

Since 1946 the chemical industry has been building new facilities at an average rate of $1 billion a year. The Chemical Industry Facts Book notes that in general this expansion has been for new products and to meet the demands resulting from new uses of established chemicals. Plants of the industry now operate in nearly every state and possession.

It was reported further that today there are 12,000 chemical plants in the nation, turning out 8,850 different products and providing jobs for more than 830,000 persons.

An annual survey on new construction conducted by the Manufacturing Chemists' Association shows that last year the chemical industry completed 354 domestic chemical construction projects costing more than $1.1 billion.

During 1957 and 1958, the survey shows, the chemical industry will spend an estimated $2.5 billion on 406 additional projects in 44 states. This construction is being carried out by 327 companies.

### South Gains

The accompanying map shows that the lion's share of this new work is taking place and will take place in the broad Southern region.

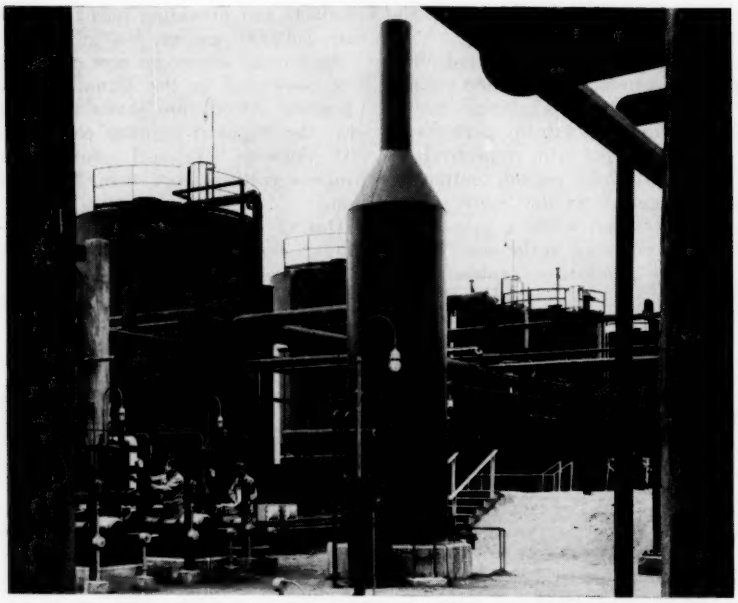
The 1956 survey showed that Texas was in the lead among the 48 states with a total of 81 projects either completed, under construction or planned. These 81 projects, valued at $639,961,000, are being located in 29 communities.

Louisiana has the second largest figure, with a total of 39 projects in the

**HOW THE TOP STATES RANK IN CHEMICALS AND ALLIED PRODUCTS MANUFACTURING**

| States | *Value Added by Manufacture (1954) (in thousands)* | *Number Employees* | *Salaries and Wages (in thousands)* |
|---|---|---|---|
| 1. New Jersey | $1,090,959 | 81,661 | $399,783 |
| 2. New York | 867,140 | 67,818 | 304,959 |
| **3. Texas** | **725,247** | **37,289** | **181,448** |
| 4. Illinois | 656,886 | 51,908 | 240,020 |
| 5. Ohio | 557,231 | 41,596 | 195,101 |
| 6. Pennsylvania | 509,249 | 45,182 | 200,220 |
| 7. Michigan | 499,768 | 39,158 | 192,909 |
| **8. Tennessee** | **455,691** | **43,083** | **197,191** |
| **9. Virginia** | **430,846** | **34,925** | **146,443** |
| 10. California | 429,168 | 32,893 | 152,373 |
| 11. Indiana | 338,286 | 26,719 | 133,290 |
| **12. West Virginia** | **320,419** | **21,741** | **111,459** |
| **13. Louisiana** | **251,351** | **17,535** | **83,893** |
| 14. Missouri | 233,418 | 18,271 | 81,300 |
| 15. Massachusetts | 187,429 | 15,923 | 69,963 |
| **16. Kentucky** | **148,659** | **9,798** | **46,242** |
| **17. Maryland** | **144,478** | **12,632** | **51,631** |
| **18. South Carolina** | **143,135** | **19,294** | **93,089** |
| 19. Connecticut | 126,931 | 9,946 | 44,612 |
| 20. Washington | 118,212 | 11,087 | 61,506 |
| 21. Kansas | 108,799 | 9,353 | 41,125 |
| **22. North Carolina** | **103,854** | **11,496** | **43,721** |
| 23. Delaware | 101,153 | 5,938 | 27,181 |
| 24. Minnesota | 99,569 | 5,317 | 21,950 |
| 25. Wisconsin | 97,554 | 8,985 | 40,684 |

Source: U. S. Bureau of the Census, ANNUAL SURVEY OF MANUFACTURES: 1954 (issued Dec. 1956)



A tar stillman (left) puts a pump through its paces, as a pipefitter applies insulation to a pipe line. This action takes place at the Fairfield Tar plant of the Tennessee Coal and Iron Division of the United States Steel Corporation.

three categories, located in 17 communities and with a total value of $378,660,000.

In addition to Texas and Louisiana, other Southern states among the top 10 in the 1956 MCA survey were Florida, with projects totaling $237,925,000; West Virginia, $229,495,000; and Tennessee, $145,800,000.

Consolidation of national figures for facilities completed during 1956, under construction and planned shows that the industry is currently making its largest investment, $862 million, in organic chemicals. The second largest investment, $816 million, is in the field of inorganic chemicals. The third largest, $465 million, is for chemically produced metals or metallic compounds, not including aluminum, processed uranium, copper and ferroalloys.

Of the $862 million investment for organic chemicals, $400 million—or 46 per cent—is accounted for by the top states in chemical construction—Texas, Louisiana and California.

MCA notes that large investment, sometimes millions of dollars, is often required to build today's chemical plant. Many considerations enter into the decision on plant location. The location factors, as listed by MCA, show why the South is forging ahead in winning new chemical industries. They include:

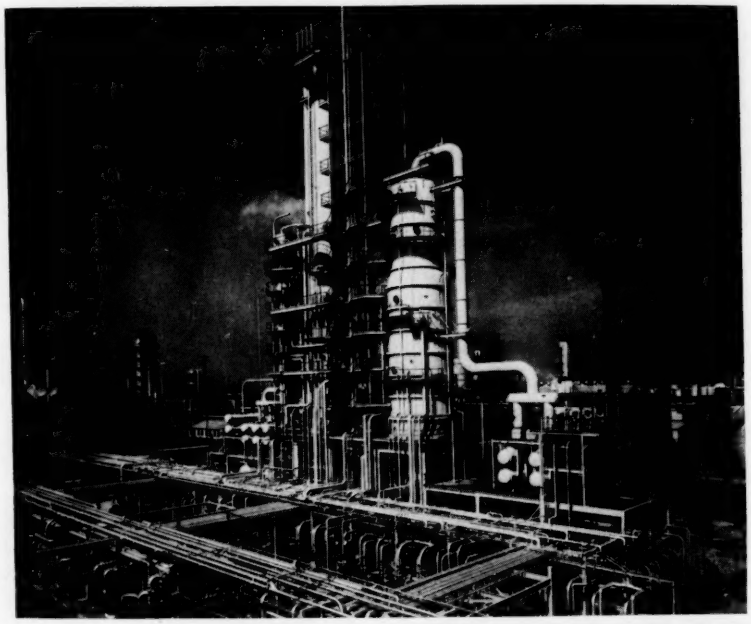
1. Availability of raw materials.
2. Availability of labor.
3. Proximity to markets.
4. Access to low-cost transportation.
5. Tax rates, local and state laws.
6. Availability and cost of power and fuel.
7. Good-quality, low-cost water supply.

Additional emphasis on the chemical industry was given recently in a talk by Dr. Frank J. Soday, of Decatur, Alabama, chairman of the board of the Southern Association of Science and Industry, Inc.

While industry in general is expanding at the rate of some three per cent a year, he observed, the expansion in the field of industrial chemicals has been twice as rapid.

Of equal importance, he said, is the fact that the chemical industry accounts for at least 20 per cent of all industrial production in the United States. "It is the only industry," he declared further, "that serves all of the 72 basic industry groups recognized by the U. S. Department of Commerce, and among all industries it is the most firmly wedded to research."

He went on to say it is particularly noteworthy that more than half of the nation's new chemical plants have located south of the Mason-Dixon line in the past few years.



The complexity of today's chemical industry is illustrated by a picture of one of the distillation units in the Baton Rouge Refinery of Esso Standard Oil Company. These units produce gasoline, kerosene, and other products from petroleum.

# For FLUORINE gas or liquid

# HYDROFLUORIC ACID aqueous or anhydrous

# INORGANIC FLUORINE COMPOUNDS

## see GENERAL CHEMICAL

General Chemical's leadership in fluorine chemistry is well established . . . widely recognized. The inorganic fluorine compounds listed here are available now—in commercial or research quantities. Many others are under investigation, or can be produced readily if required. Whenever you need fluorine chemicals of any type—call *General Chemical*, industry's primary source of supply for elemental fluorine, hydrofluoric acid and the fluorine compounds produced from them.

### FLUORINE
Elemental Fluorine, Gaseous & Liquid

### ACIDS
Fluoboric Acid
Fluosulfonic Acid
Hydrofluoric Acid, Anhydrous
Hydrofluoric Acid, Anhydrous High Purity
Hydrofluoric Acid, Aqueous
Hydrofluoric Acid, Aqueous, Purified & Reagent
Hydrofluoric Acid, Electronic

### ACID FLUORIDES
Ammonium Bifluoride
Potassium Bifluoride
Sodium Bifluoride

### ALKALI FLUOBORATES
Ammonium Fluoborate
Potassium Fluoborate
Sodium Fluoborate

### ALKALI FLUORIDES
Ammoninum Fluoride
Potassium Fluoride, Crystal & Anhydrous
Sodium Fluoride, Technical
Sodium Fluoride, Reagent

### BORON FLUORIDE COMPLEXES
Boron Fluoride Ether (Diethyl) Complex
Boron Fluoride Phenol Complex
Boron Fluoride Diacetic Acid Complex
Boron Fluoride Di-n-Butyl Ether Complex
Boron Fluoride Dihydrate
Boron Fluoride Piperidine Complex
Boron Fluoride Ethyl "Cellosolve" Complex
Boron Fluoride Hexamethylene-tetramine Complex
Boron Fluoride Monoethylamine Complex
Boron Fluoride Para-cresol Complex
Boron Fluoride Triethanolamine Complex
Boron Fluoride Urea Complex

### DOUBLE FLUORIDES
Chromium Potassium Fluoride
Potassium Ferric Fluoride
Potassium Nickel Fluoride
Potassium Titanium Fluoride
Potassium Zinc Fluoride
Potassium Zirconium Fluoride
Sodium Zirconium Fluoride
Sodium Silico Fluoride
Potassium Aluminum Fluoride

### HALOGEN FLUORIDES
Bromine Trifluoride
Bromine Pentafluoride
Chlorine Trifluoride
Iodine Pentafluoride

### METAL FLUORIDES
Aluminum Fluoride
Aluminum Fluoride, Crystal
Antimony Trifluoride
Antimony Pentafluoride
Barium Fluoride
Bismuth Trifluoride
Cadmium Fluoride
Calcium Fluoride
Chromium Fluoride
Cupric Fluoride
Lead Tetrafluoride
Magnesium Fluoride (Not Optical Grade)
Mercuric Fluoride
Manganese Trifluoride
Molybdenum Hexafluoride
Nickelous Fluoride
Selenium Hexafluoride
Silicon Tetrafluoride
Silver Difluoride
Stannous Fluoride
Strontium Fluoride
Titanium Tetrafluoride
Tellurium Hexafluoride
Tungsten Hexafluoride
Zirconium Tetrafluoride

### NON-METALLIC FLUORIDES
Boron Fluoride, Gas
Sulfur Hexafluoride

### METAL FLUOBORATE SOLUTIONS
Cadmium Fluoborate
Chromium Fluoborate
Cobalt Fluoborate
Copper Fluoborate
Ferrous (Iron) Fluoborate
Indium Fluoborate
Lead Fluoborate
Nickel Fluoborate
Silver Fluoborate
Stannous (Tin) Fluoborate
Zinc Fluoborate

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Chemical employment is increasing faster in the South than in any other area, and more than 15,000 professional chemists and chemical engineers are employed in the Southern chemical industry. The South already has a third of the nation's chemical industry, and it is expected that this will increase to a half, certainly within the next decade.

Dr. Soday asserted also that the majority of the chemical industry undoubtedly will be located in the South by 1975. And, in view of the Manufacturing Chemists' findings in its 1956 study, the rate of new chemical plant building in the South seems likely to give the region the majority of plants perhaps well before 1975.

### Petrochemicals

More than 80 per cent of the petrochemicals plants in the nation are located in the South. Petrochemicals are derived from petroleum and natural gas, the South's most important mineral products.

They account for more than 25 per cent of all the chemicals produced in the nation today, and it is expected that this will increase to 50 per cent within the next decade.

In this connection the Chemical Industry Facts Book noted that output of petrochemicals jumped from a mere 75 tons in 1925 to 15 million tons by 1955, and Dr. Soday predicted that output will reach 27 million tons by 1975.

More than one-third of the petrochemicals produced will be used in the manufacture of plastics and plasticizing agents. Since the major portion of the raw materials used in the production of plastics may be obtained in this region, the South has a more than ordinary interest in plastics output.

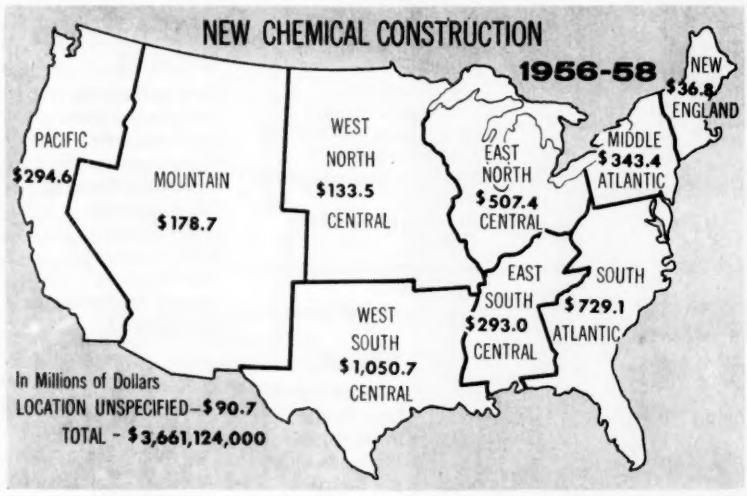
It would seem, therefore, that a fruitful field for development would be the provision of additional plants in the South for converting the basic raw materials to plastics, as well as for the manufacture of finished articles from such plastics.

Ammonia is an important petrochemical, particularly from the standpoint of Southern agriculture. More than half of the nation's synthetic ammonia production capacity of three million tons is in the South, and productive capacity is growing rapidly. It is expected that this capacity will reach seven million tons within 15 years or so.

Another important field of expansion in the Southern chemical industry has been the manufacture of synthetic rubber, as the majority of the country's production facilities are located in this region.

**TOP TEN STATES IN CHEMICAL CONSTRUCTION**
(1956 MCA Survey)

| | *By thousands* |
|---|---|
| Texas | $639,961 |
| Louisiana | 378,660 |
| California | 245,500 |
| Florida | 237,925 |
| West Virginia | 229,495 |
| Ohio | 226,897 |
| Tennessee | 145,800 |
| Michigan | 141,350 |
| New Jersey | 139,125 |
| Pennsylvania | 115,265 |




Source: MCA Construction Survey, 1956

### Rubber Industry

In 1956 the rubber industry spent some $180 million for expansion, as against $150 million in 1955 and $131 million in 1954. The industry is moving steadily toward less dependence on foreign materials and large consumption of chemicals to make synthetic rubber.

Coal, a major natural resource in some parts of the South, is increasing constantly in importance as a chemical raw material. Latest available figures show that the value of coal chemical materials made in coke ovens in 1955 was $378 million.

A ton of coke oven coal yields about 1,400 pounds of coke, 100 pounds of coke-screenings, 10,000 cubic feet of fuel gas, eight gallons of tar, three gallons of light oil, and 20 pounds of sulfate of ammonia or ammonium phosphate. From the light oils come benzene, a basic raw material for many organic chemicals, and toluene. From tar come thousands of compounds.

### Organic Chemicals

Besides petroleum and coal, a significant source of organic chemicals is agriculture. Basic raw materials of the latter are carbohydrates, fats and oils, protein, and miscellaneous others. There are both vegetable and animal sources for all these categories.

From carbohydrates come such products as nitrocellulose, rayon, cellophane, acetate, adhesives, leather and textile chemicals, soaps, plastics, paper chemicals, pharmaceuticals, and so on.

Fats and oils may be processed into shortening, paints and varnish, pharmaceuticals, soaps, oil, lubricants, and many other things.

Proteins go into synthetic fibers, printing inks, casein plastics and paints.

Among the inorganic raw materials used by industry for the manufacture of heavy chemicals and thousands of chemical products are sulfur, obtained from underground deposits in Texas and Louisiana, salt from brine wells and mines, phosphate rock from Florida and Tennessee, and others. It is noteworthy that most raw materials used by the industry come from domestic sources.

Water and air also are important to the chemical industry for various purposes.

According to figures gleaned in the Census Bureau's 1954 annual Survey of Manufactures, nine Southern states were among the top 25 in chemicals and allied products manufacturing.

Texas was at the top in the South, with $725,247,000 value added by manufacture, 37,289 employees in the chemical industry, and a chemical payroll of $131,448,000 annually.

The total value added by manufacture among the nine top ranking Southern states in 1954 was $2,723,680,000.

These states had a total of 207,793 employees in the chemical and allied products industries, and the salaries and wages of these workers came to $955,157,000.

Preliminary figures compiled by the U. S. Bureau of Labor Statistics show that nationally the chemicals and allied products industries employed a total of 838,800 in 1956. The BLS figures show that chemicals ranked tenth among the 21 major manufacturing industry groups from the standpoint of total employment.

As a result of the highly technical and varied nature of its operations and products, the chemical industry employs not only chemists and chemical engineers but also other technically trained persons of every description, ranging all the way from agronomists to zoologists.

Although the range of industry employment extends through every kind of job specialty, a 1955 MCA survey showed that more than half of the executives in 75 companies have degrees in science or engineering, or both. The trend in this direction is increasing at the same time that the industry's needs for scientists, engineers and other technically trained people are rapidly accelerating.

Another MCA study in 1956 revealed that of the 884,000 scientists and engineers employed that year in the nation, some 77,000, or 8.7 per cent, were working in the chemical and allied products industries.

It was indicated that by 1965 the nation may fall short by 457,000 of the 1,680,000 scientists and engineers it will require. MCA said the chemical industry alone will be threatened with a deficit of 93,000 such skilled persons by 1965 unless the supply is substantially increased.

The opportunities here for the future are obvious.

In order to meet the need and to let prospective employees know of the



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opportunities, the chemical industry companies are now engaged in a joint program of assistance to education which was developed, and is supervised, by MCA. Specific objectives of the program are to:

1. Inspire students especially talented in science and mathematics with the desire to follow science as a career in industry, government or education.

2. Assist educators through the development of science teaching aids and curriculum enrichment materials and services and, insofar as possible, to encourage the liberal education of students in order that they may be equipped for the able performance of broad responsibilities.

3. Aid and encourage the education, recruiting and inservice training of science teachers and education administrators, seeking thereby not only to increase their numbers and effectiveness but also their prestige.

To carry out these aims, programs have been developed for general science teachers and students at the junior high school level, for teachers and students of senior high school chemistry classes, and for elementary school personnel. There is also an awards program for college teachers in the field of chemistry at the undergraduate level.

It is emphasized that a keystone to the entire effort is community education cooperation activity whereby industry members work cooperatively with schools and colleges in plant localities throughout the country.

Another important aspect of chemical industry activity are the extensive research programs. Last year, for example, the chemical industry completed new research facilities at a cost of $42 million, is currently building $37 million more, and has definitely planned new facilities at an estimated cost of nearly $16 million—a total of $95 million.

Concerning this, MCA observed: "Research is actually insurance against stagnation and obsolescence. It is a down payment on future business. The proved value of research in this connection is demonstrated by the fact that management in the chemical industry has increased research budgets from less than one-half cent per dollar of sales in the early years to approximately three cents in 1957."

Although one is likely when thinking of a chemical plant to visualize some huge and complicated facility costing into the millions of dollars, Census Bureau figures show that from the standpoint of the total number of chemical plants, most of them are small.

Nationally, the 1954 Census of Manufactures showed, units with one to 19 employees account for 65.1 per cent of all the chemical industry plants. Those with from 20 to 99 workers constitute 24.4 per cent of the total number, while those employing 100 or more make up only 10.5 per cent.

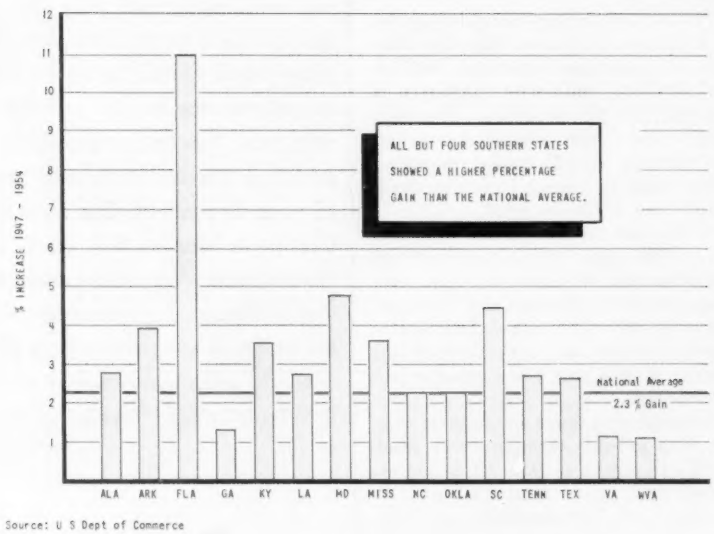
Since the industry has become highly automated, a plant with a relatively small number of employees can be an important factor in the production picture. This is certainly true of the South which boasts a great number of the smaller operations scattered throughout the region.

## Southern Industrial Chemical Firms

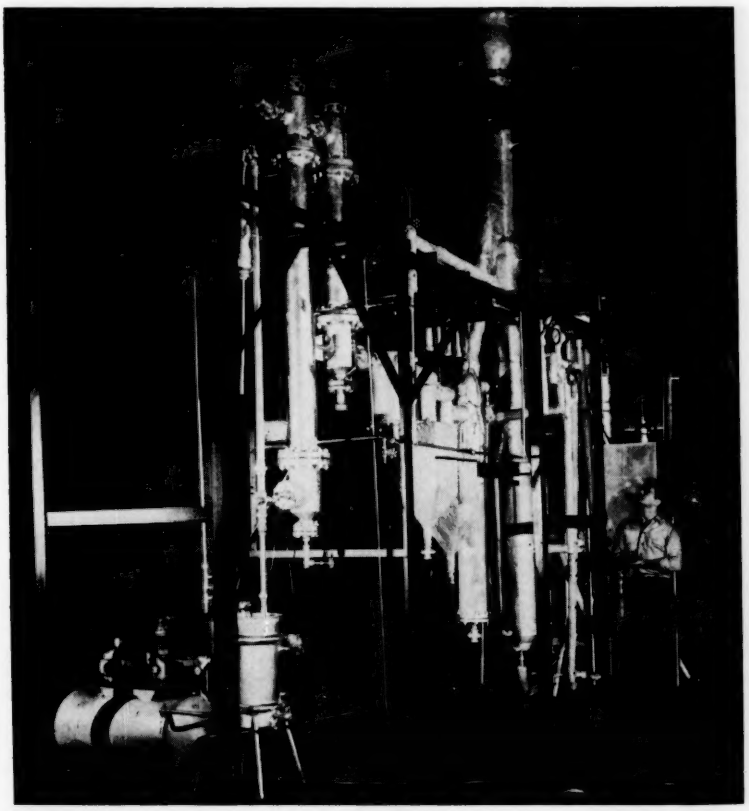
The following is a listing of firms which are engaged in the manufacture of chemicals which are bought and used by industry.

Save on Your
INDUSTRIAL
TRACK
FULLY
GUARANTEED
FOSTER
QUALITY
RELAYING
RAILS
Lower installation and maintenance costs—handle more cars better. Foster nationwide warehouses also stock every New Rail Section 12# through 175#, Switch Material and Accessories to meet your specific job requirements.
SEND FOR CATALOGS RT-9
RAILS - TRACK EQUIPMENT - PIPE - PILING
L.B.FOSTER co.
PITTSBURGH 30 • NEW YORK 7 • CHICAGO 4
ATLANTA 8 • HOUSTON 2 • LOS ANGELES 5


## INDUSTRIAL CHEMICALS
### Output In $ Millions


% INCREASE 1947 - 1954
ALL BUT FOUR SOUTHERN STATES SHOWED A HIGHER PERCENTAGE GAIN THAN THE NATIONAL AVERAGE.
National Average
2.3 % Gain
ALA ARK FLA GA KY LA MD MISS NC OKLA SC TENN TEX VA WVA

Source: U S Dept of Commerce



Chemicals and low-cost fuels via low-temperature carbonization of coal are the objectives of this pilot plant development at the Southern Research Institute. This outstanding organization is headquartered in Birmingham, Alabama.

Listed are firms employing 100 or more persons, and the number of employees is indicated by the code: C (100-250); D (250-1,000); E (1,000 or more).

Some listings included in the Standard Industrial Classification's chemical section have been omitted in this section. For these listings, we refer you to the Blue Book of Southern Progress, 1957 edition. If your firm manufactures any of the products below and employs 100 or more persons, and has inadvertently been omitted from this list, please contact us so that your company will be included in our permanent files.

### NUCLEAR ENERGY PLANTS

DuPont Savannah River Plant, Aiken, S. C. (E)
Pantex Ordnance Plant, Amarillo, Texas. (E)
Union Carbide Nuclear Co., Paducah, Ky. (E)
Union Carbide Nuclear Co., Oak Ridge, Tenn. (E)

### SULFURIC ACID

American Smelting & Refining Co., Corpus Christi, Texas. (D)
Armour Fertilizer Works, Jacksonville, Fla. (C)
Armour Fertilizer Works, Atlanta, Ga. (C)
Armour Fertilizer Works, Houston, Tex. (C)
Baugh Chemical Co., Baltimore, Md. (C)
Consolidated Chemicals Industries, Mobile, Ala. (C)
Consolidated Chemical Industries, Inc., Baton Rouge, La.
Consolidated Chemical Industries, Inc., Houston, Tex. (D)
Jefferson Lake Sulphur Co., Starks, La. (C)
Olin Mathieson Chemical Corp., Baltimore, Md. (D)
Olin Mathieson Chemical Corp., Pasadena, Tex. (D)
Robertson Chemical Corp., Norfolk, Va. (C)
F. S. Royster Guano Co., Baltimore, Md. (C)
Smith-Douglas Co., Inc., Danville and Norfolk, Va. (D)
Spencer Chemical Co., Vicksburg, Miss.
Swift & Co., Norfolk, Va. (C)
Tennessee Copper Co., Copperhill, Tenn. (E)
Texas City Chemicals, Inc., Texas City, Tex. (C)
Virginia-Carolina Chemical Corp., Memphis, Tenn. (C)
Virginia-Carolina Chemical Corp., Richmond, Va. (E)

### ALKALIES AND CHLORINE

Allied Chemical & Dye Corp., Brunswick, Ga. (C)
Arvey Corp., Velsicol Div., Memphis, Tenn. (C)
Columbia-Southern Chemical Corp., Lake Charles, La. (D)
Columbia-Southern Chemical Corp., Corpus Christi, Tex. (D)
Diamond Alkali Co., Sheffield, Ala. (B)
Diamond Alkali Co., Pasadena, Tex. (D)
Dow Chemical Co., Plaquemine, La. $50 million
Dow Chemical Co., Freeport, Tex. (E)
Ethyl Corp., Baton Rouge, La. (E)
Ethyl Corp., Pasadena, Tex. (E)
Food Machinery & Chemical Corp., S. Charleston, W. Va. (E)
Hercules Powder Co., Hopewell, Va. (E)
Kaiser Aluminum & Chemical Corp., Gramercy, La. $60 million. (D)
Monsanto Chemical Co., Anniston, Ala. (C)
Olin Mathieson Chemical Corp., McIntosh, Ala. (C)
Olin Mathieson Chemical Corp., Brunswick, Ga. Under const.
Olin Mathieson Chemical Corp., Lake Charles, La. (E)
Pennsylvania Salt Mfg. Co., Calvert City, Ky. (D)
Tennessee Valley Authority, Muscle Shoals, Ala. (E)
Wyandotte Chemicals Corp., Geismar, La. Under const. $20 million

### INDUSTRIAL INORGANIC CHEMICALS (Not elsewhere classified)

Alabama By-Products Corp., Birmingham, Ala. (E)
Allied Chemical & Dye Corp., Port St. Joe, Fla.
Allied Chemical & Dye Corp., Baltimore, Md. (D)
Allied Chemical & Dye Corp., General Chemical Div.; Hopewell, Va. (D)
Allied Chemical & Dye Corp., Nitrogen Div.; Hopewell, Va. (E)
Allied Chemical & Dye Corp., Pulaski, Va. (C)
Aluminum Company of America, Mobile, Ala. (D)
American Agricultural Chemical Co., Pierce, Fla. (D)
American Lithium Chemicals, Inc., San Antonio, Tex. (C)
Atlas Powder Co., Marshall, Tex. (D)
Beaunit Mills, Inc., Coosa Pines, Ala. (E)
Commercial Solvents Corp., Sterlington, La. (D)
DeBardeleban Coal Corp., Birmingham, Ala. (D)
E. I. du Pont de Nemours & Co., Inc., Memphis, Tenn. (D)
Escambia Chemical Co., Pensacola, Fla. (C)
Fairmont Coke Works, Fairmont, W. Va. (C)
Filtrol Corp., Jackson, Miss. (C)
Foote Mineral Co., Inc., Sunbright, Va. (D)
Freeport Sulphur Co., Port Sulphur, La. (E)
W. R. Grace & Co., Lake Charles, La. (C)
Grace Chemical Co., Memphis, Tenn. (D)
Gulf Oil Corp., Port Arthur, Tex. (E)
Jefferson Island Salt Co., Jefferson Island, La. (C)
Ketona Chemical Co., Tarrant, Ala.
Lion Oil Co., El Dorado, Ark. (D)
Mississippi Chemical Corp., Yazoo City, Miss. (C)
Monsanto Chemical Co., Columbia, Tenn. (D)
N R C Metals Corp., Milton, Fla. (C)
National Carbide Co., Louisville, Ky. (D)
National Carbide Co., Ivanhoe, Va. (C)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- Synthetic rubber . . .
- Reclaim and resin-based solvent adhesives and industrial coatings . . .
- All types of latex and resin dispersion-based adhesives and coatings.

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National Carbon Co., Inc., Clarksburg, W. Va. (D)
Nyotex Chemicals, Inc., Houston, Tex. (C)
Olin Revere Metals Corp., Burnside, La. Under const. $50 million. (E)
Petroleum Chemicals, Inc., Lake Charles, La. (D)
Phelps-Dodge Refining Corp., El Paso, Tex. (D)
Phillips Chemical Co., Dumas, Tex. (D)
Republic Steel Corp., Gadsden, Ala. (E)
Reynolds Metals Co., Corpus Christi, Tex. (E)
San Jacinto Chemical Co., Houston, Tex. (C)
Shea Chemical Co., Columbia, Tenn. (C)
Shell Chemical Corp., Norco, La. (C)
Shell Chemical Corp., Houston, Tex. (E)
Spencer Chemical Co., Henderson, Ky. (C)
Stauffer Chemical Co., Freeport, Tex. (C)
Superior Forest Products Co., Opelika, Ala. (C)
Tennessee Coal & Iron Div., Fairfield, Ala. (E)
U. S. Pipe & Foundry Co., Birmingham, Ala. (E)
Victor Chemical Works, Tarpon Springs, Fla. (C)
Victor Chemical Works, Mt. Pleasant, Tenn. (D)
Victor Chemical Works, Nashville, Tenn. (D)
Virginia-Carolina Chemical Corp., Nichols, Fla. (D)
Virginia Smelting Co., West Norfolk, Va. (D)
Wiley Fancher, Inc., Sardis, Ala.
Woodward Iron Co., Woodward, Ala. (E)

### CYCLIC (COAL-TAR) CRUDES

Allied Chemical & Dye Corp., Birmingham, Ala. (D)
Brin Chemical Co., Tulsa, Okla.
Koppers Co., Inc., N. Montgomery, Ala. (C)
Pittsburg Consolidated Coal Corp., Cresap, W. Va.
Tennessee Products & Chemical Corp., Chattanooga, Tenn. (C)

### INTERMEDIATES, DYES, COLOR LAKES, TONERS

Allied Chemical & Dye Corp., National Aniline Div.; Moundsville, W. Va. (C)
Allied Chemical & Dye Corp., Solvay Process Div.; Moundsville, W. Va. (D)
Allied Chemical & Dye Corp., Round Bottom, W. Va.
Eastman Kodak Co., Chamblee, Ga. (C)

### PLASTICS MATERIALS AND ELASTOMERS (Except Synthetic Rubber)

See Standard Industrial Classification 2823, The Blue Book of Southern Progress, 1957 edition.

### SYNTHETIC RUBBER

American Synthetic Rubber Corp., Louisville, Ky. (D)
Copolymer Rubber & Chemical Corp., Baton Rouge, La. (D)
E. I. du Pont de Nemours & Co., Louisville, Ky. (E)
Firestone Tire & Rubber Co., Lake Charles, La. (D)
Goodrich-Gulf Chemicals, Inc., Port Neches, Tex. (D)
Goodrich-Gulf Chemicals, Inc., Institute, W. Va. (D)
Goodyear Synthetic Rubber Plant, Houston, Tex. (D)
Virginia Hall, Inc., Macon, Ga. (C)
Humble Oil & Refining Co., Houston, Tex. (E)
Phillips Chemical Co., Borger, Tex. (D)
Texas-U. S. Rubber Co., Port Neches, Tex. (D)
Thiokol Chemical Co., Huntsville, Ala. (D)
United Rubber & Chemical Co., Baytown, Tex. (D)

### EXPLOSIVES

E. I. du Pont de Nemours & Co., Birmingham, Ala. (D)
Hercules Powder Co., Inc., Birmingham, Ala. (D)
Hercules Powder Co., Brunswick, Ga. (E)
King Powder Co., Riverton, Ky. (C)
Phillips Petroleum Co., McGregor, Tex. (E)
Thiokol Chemical Corp., Marshall, Tex. (D)

### INDUSTRIAL ORGANIC CHEMICALS (Not elsewhere classified)

Allied Chemical & Dye Corp., Orange, Tex. (C)

American Oil Co., Texas City, Tex. (E)
Better Monkey Grip Co., Dallas, Tex. (C)
Carbide & Carbon Chemical Co., Parkersburg, W. Va. (E)
Celanese Corporation of America, Bishop, Tex. (D)
Celanese Corporation of America, Pampa, Tex. (C)
Cosden Petroleum Corp., Big Spring, Tex. (D)
E. I. du Pont de Nemours & Co., Inc., La Porte, Tex. (D)
E. I. du Pont de Nemours & Co., Inc., Victoria, Tex. (D)
Eastern States Petroleum Co., Inc., Houston, Tex. (D)
Great Southern Chemical Corp., Corpus Christi, Tex. (C)
Jefferson Chemical Co., Port Neches, Tex. (D)
Monsanto Chemical Co., Luling, La. (D)
Monsanto Chemical Co., Texas City, Tex. (E)
National Distillers Products Corp., New Orleans, La. (C)
Newport Industries, Inc., Bay Minette, Ala. (C)
Olin Mathieson Chemical Corp., Brandenburg, Ky. (D)
Olin Mathieson Chemical Corp., Morgantown, W. Va. (D)
Pasco Packing Co., Dade City, Fla. (E)
Petro-Tex Chemical Corp., Houston, Tex. (D)
Phillips Chemical Co., Pasadena, Tex. (D)
The Quaker Oats Co., Memphis, Tenn. (C)
Rohm & Haas Co., Pasadena, Tex. (C)
Stanolind Oil & Gas Co., Brownsville, Tex. (D)
Stauffer Chemical Co., Mobile, Ala. (C)
U. S. Industrial Chemicals, Inc., Baltimore, Md. (E)

### DRUGS AND MEDICINES

See Standard Industrial Classification 283 in The Blue Book of Southern Progress, 1957 edition.

### SOAP AND GLYCERINE, CLEANING AND POLISHING PREPARATIONS, SULFONATED OILS AND ASSISTANTS

See Standard Industrial Classification 284 in The Blue Book of Southern Progress, 1957 edition.

### PAINTS, VARNISHES, LACQUERS, JAPANS, ENAMELS; INORGANIC COLOR PIGMENTS, WHITING AND WOOD FILLERS

See April issue of MANUFACTURERS RECORD, Protective Coatings Section.

### GUM AND WOOD CHEMICALS

Arizona Chemical Co., Panama City, Fla. (C)
Armour Fertilizer Works, Nashville, Tenn. (C)
Cabot Carbon Co., Gainesville, Fla. (C)
C. C. Chappell, Cordele, Ga. (C)
Chesapeake Corporation of Virginia, West Point, Va. (D)
Continental Turpentine & Rosin Corp., Shamrock, Fla. (C)
Crosby Chemicals, Picayune, Miss. (C)
The Crossett Co., Crossett, Ark. (D)
Delta Pine Products Corp., Covington, La. (C)
Dixie Pine Products Co., Hattiesburg, Miss. (C)
Forest Products Chemical Co., Memphis, Tenn. (C)
The Glidden Co., Jacksonville, Fla. (D)
The Glidden Co., Port St. Joe, Fla. $2.7 million
Hamilton Turpentine Co., Jennings, Fla. (C)
Hercules Powder Co., Hattiesburg, Miss. (E)
Hercules Powder Co., Savannah, Ga. (D)
Koppers Co., Follansbee, W. Va. (D)
Lattie L. Lang, Pearson, Ga. (C)
Langdale Co., Lakeland, Ga. (C)
Langdale Co., Valdosta, Ga. (D)
Leas & McVitty, Buena Vista, Ga. (C)
Lehman L. Morgan, Wray, Ga. (C)
Newport Industries, Inc., Bay Minette, Ala. (C)
Newport Industries, Inc., Pensacola, Fla. (D)
Newport Industries, Inc., DeQuincy, La. (D)
Newport Industries, Inc., Oakdale, La. (D)
Newton Naval Stores, Wiggins, Miss. (C)
Frank Rose, Inc., Lakeland, Ga. (C)
Southern Extract Co., Knoxville, Tenn. (C)
Southern Gum Processing Co., Homerville, Ga. (C)
Southern Gum Processing Co., McRae, Ga. (C)
Southern Naval Stores, Columbia, Miss. (C)
Southern Resin & Chemical Co., Glen St. Mary, Fla. (C)
Stallworth Naval Stores Co., Vinegar Blend, Ala. (C)
Stubbs Co., Lanier, Ga. (C)
Union Bag-Camp Paper Corp., Savannah, Ga. (E)
West Virginia Pulp & Paper, Charleston, S. C. (E)
J. S. Young Co., Baltimore, Md. (C)

### FERTILIZERS

See Standard Industrial Classification 287 in the Blue Book of Southern Progress, 1957 edition.

### COTTONSEED OIL MILLS

See Standard Industrial Classification 2881 in the Blue Book of Southern Progress, 1957 edition.

### MARINE ANIMAL OILS

Empire Menhaden Co., Inc., Empire, La. (C)
Fish Meal Co., Moss Point, Miss. (C)
Fish Meal Co., Beaufort, N. C. (C)
Nassau Fertilizer & Oil Co., Fernandina Beach, Fla. (C)
Quinn Menhaden Fisheries, Inc., Fernandina Beach, Fla. (C)
Wallace M. Quinn Fisheries, Pascagoula, Miss. (C)
Quinn Menhaden Fisheries of Louisiana, Inc., Empire, La. (C)
Port Arthur Menhaden Products, Inc., Sabine Pass, Tex. (C)
Quinn Menhaden Fisheries of Texas, Inc., Port Arthur, Tex. (C)
Reedville Oil & Guano Co., Reedville, Va. (C)
Standard Products Co., Inc., Moss Point, Miss. (C)

### VEGETABLE OIL MILLS, ANIMAL OILS (Not elsewhere classified)

Ed Auge Packing Co., San Antonio, Tex. (C)
Blakely Peanut Co., Blakely, Ga. (C)
Farmers Gin & Warehouse Co., Blakely, Ga. (C)
Haas-Davis Packing Co., Mobile, Ala. (C)
The Humko Co., Memphis, Tenn. (D)
Inland Products Co., Huntington, W. Va. (C)
National Lead Co., Dallas, Tex. (C)
Sessions Co., Inc., Enterprise, Ala. (D)
Standard Products Co., Inc., White Stone, Va. (C)
Tungston Plantation, Capps, Fla. (C)
Wesson Oil & Snowdrift Sales Co., Houston, Tex. (D)

### ESSENTIAL OILS

Florida Citrus Canners Coop., Lake Wales, Fla. (D)
Fruit Industries, Inc., Bradenton, Fla. (D)
Plymouth Citrus Products Coop., Plymouth, Fla. (C)
Snively Groves, Inc., Winter Haven, Fla. (D)

### PERFUMES, COSMETICS, OTHER TOILET PREPARATIONS

See Standard Industrial Classification 2893 in The Blue Book of Southern Progress, 1957 edition.

### BONE, BLACK, CARBON BLACK, LAMP BLACK

Cabot Carbon Co., Franklin, La. (C)
Cabot Carbon Co., Ville Platte, La. (C)
Cabot Carbon Co., Pampa, Tex. (C)
Columbian Carbon Co., El Dorado, Ark. (D)
Columbian Carbon Co., Franklin, La. (D)
Columbian Carbon Co., Conroe, Tex. (C)
Continental Carbon Co., Amarillo, Tex. (C)
J. M. Huber Corp., Borger, Tex. (D)
Marietta Mfg. Co., Point Pleasant, W. Va. (D)
Phillips Chemical Co., Borger, Tex. (D)
Sid Richardson Carbon Co., Odessa, Tex. (C)
United Carbon Co., Inc., Aransas Pass, Tex. (C)
Thermatomic Carbon Co., Sterlington, La. (C)
United Carbon Co., Inc., Falfurrias, Tex. (C)
United Carbon Co., Shamrock, Tex. (C)
United Carbon Co., Inc., Charleston, W. Va. (E)
Witco Chemical Co., Amarillo, Tex. (C)

### COMPRESSED AND LIQUEFIED GASES

Air Reduction Sales Co., Birmingham, Ala. (D)
Air Reduction Sales Co., Houston, Tex. (C)
American Cyanamid Co., New Orleans, La. (D)
Big Three Welding Equipment Co., Houston, Tex. (C)
East Texas Oxygen Co., Tyler, Tex. $275,000
National Carbide Co., Div. of Air Reduction Co., Inc.; Calvert City, Ky. (D)
Southern Oxygen Co., Inc., Bladensburg, Md. (C)

### INSECTICIDES AND FUNGICIDES

Allied Chemical & Dye Corp., Baltimore, Md. (C)
Chapman Chemical Co., Memphis, Tenn. (C)
Dettelbach Insecticide Corporation of Texas, Dallas
Diamond Alkali Co., Houston, Tex. (C)
Diamond Black Leaf Co., Louisville, Ky. (C)
Diamond Black Leaf Co., Richmond, Va. (C)
Food Machinery & Chemical Corp., Baltimore, Md. (D)
Milner Products Co., Inc., Jackson, Miss. (C)
Mitchell Insecticide Co., Helena, Ark.
Olin Mathieson Chemical Corp., Elkton, Md.
Pine Bluff Chemical Co., Pine Bluff, Ark. (C)
Woolfolk Chemical Works, Inc., Fort Valley, Ga. (C)

### SALT

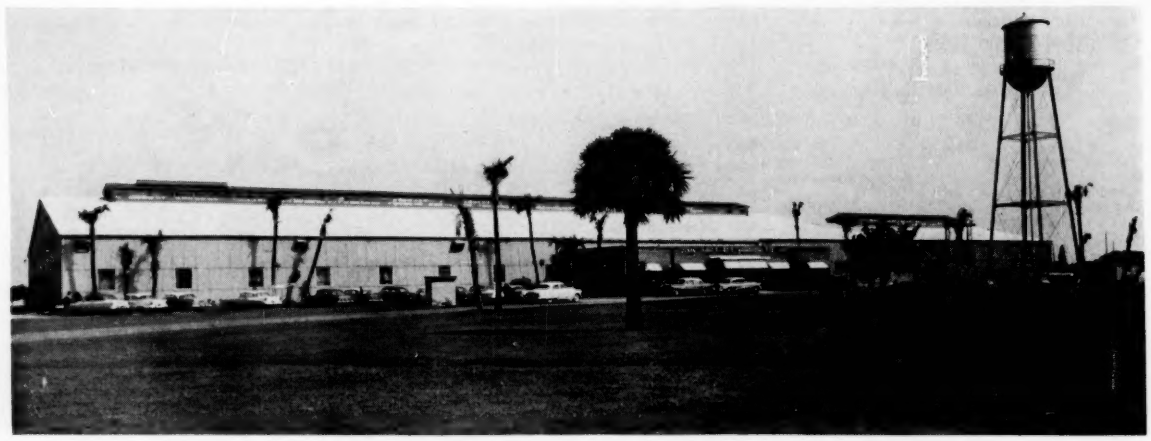
Carey Salt Co., Winnfield, La. (C)
International Salt Co., Inc., Avery Island, La. (C)
Morton Salt Co., Weeks, La. (C)
Morton Salt Co., Grand Saline, Tex. (C)

### INDUSTRIAL ADHESIVES

Arabol Mfg. Co., Atlanta, Ga.
Armour & Co., Atlanta, Ga. (D)
Continental Tapes Co., Cayce, S. C. (C)
General Adhesives Co., Nashville, Tenn.
Kendall Co., Franklin, Tenn. (C)
Minnesota Mining & Mfg. Co., Guin, Ala. (C)

### CHEMICALS, CHEMICAL PRODUCTS (Not elsewhere classified)

Allied Chemical & Dye Corp., General Chemical Div.; Baton Rouge, La. (D)
Allied Chemical & Dye Corp., Solvay Process Div.; Baton Rouge, La. (D)
American Cyanamid Co., Fort Worth, Tex. (C)
Atlas Processing Co., Shreveport, La. (C)
Baroid Div. of National Lead Co., Houston, Tex. (D)
Borg-Warner Corp., Washington, W. Va. $10 million
Celanese Corp., Houston, Tex.
Celanese Corporation of America, Gallipolis Ferry, W. Va.
Chemical Specialties Co., Charlotte, N. C.
Coastal Chemical Co., Savannah, Ga.
Continental Oil Co., Westlake, La. (D)
Crosby Chemicals, Inc., Deridder, La. (D)
Dixie Chemical, Inc., Greenwood, S. C. $100,000
E. I. du Pont de Nemours & Co., Inc., Columbia, Tenn. (C)
E. I. du Pont de Nemours & Co., Inc., Parkersburg, W. Va.
Ethyl Corp., Orangeburg, S. C. (C)
Foster Wheeler Corp., Lake Charles, La. $12 million
General Aniline & Film Corp., Calvert City, Ky. (C)
Gulf Naval Stores Co., Andalusia, Ala. (D)
Gulf States Asphalt Co., Inc., South Houston, Tex. (C)
A. C. Horn Company of Texas, Inc., Houston, Tex. (C)
Jefferson Lake Sulphur Co., Starks, La. (C)
Kellogg Company, Houston, Tex.
Kendall Co., Franklin, Ky. (C)
Koppers Co., Arroyo Bottom, W. Va.
Layne Texas Co., Houston (C)
Lubrizol Corp., Pasadena, Tex. (C)
Mobay Chemical Co., New Martinsville, W. Va. (C)
Moreland Chemical Co., Inc., Spartanburg, S. C. (D)
Panther Oil & Grease Mfg. Co., Fort Worth, Tex. (D)
Radiator Specialty Co., Charlotte, N. C. (C)
Sandox Chemical Works, Charlotte, N. C.
Shea Chemical Co., Chester, W. Va.
Southern States Chemical Co., Charlotte, N. C.
Standard Ultramarine & Color Co., Huntington, W. Va. (D)
Stevenson Chemical Co., College Park, Ga.
Texize Chemicals, Inc., Palestine, Tex.
Thiokol Chemical Corp., Elkton, Md. (C)
Union Carbide & Carbon Corp., Sistersville, W. Va. (C)
Universal Oil Products Co., Shreveport, La. (C)
U. S. Industrial Chemicals Co., Huntsville, Ala. (C)
Walling Keith Chemical Co., Birmingham, Ala.
Zone Co., Fort Worth, Tex. (C)



Above is pictured the Dixie Paint & Varnish Company of Brunswick, Georg'a—a Southern firm which has experienced outstanding success. Housed on a 14-acre site, Dixie Paint has ultra-modern paint manufacturing equipment, as well as excellently equipped laboratories for continued research aimed toward the improvement of products. This new million dollar facility contains 80,000 square feet of space.

# Brunswick Paint Firm Sets Growth Example

**Some 16 years ago the founder of Dixie Paint & Varnish Company began operations by mixing paint in a converted washing machine. Today the organization is in a million-dollar plant with 80,000 square feet of space. Here's the story . . .**

**by Charles Layng**

BRUNSWICK, GA.—In 1941, W. Quealy Walker decided that he wanted to manufacture a quality paint. He acquired an antiquated washing machine which he transformed into a mixer, rented a small store in Brunswick, Georgia, and went to work. Just recently, the Dixie Paint & Varnish Co., Inc., the outgrowth of this small store, moved into a new million dollar 80,000 square feet plant in Brunswick.

Housed on a 14-acre site, Dixie Paint now has ultra-modern paint manufacturing equipment, as well as excellently equipped laboratories for continued research aimed toward the improvement of the product.

As president of the company, Walker no longer mixes paint in a converted washing machine, but he's a close observer of everything that concerns the quality production of the company's Duralite line of paints.

Dixie Paint & Varnish was by no means like Topsy—it didn't just grow. When Walker had mixed his first twenty gallons of paint, he went out and sold it personally. Gradually the business expanded; then, suddenly, the company was out of business, so far as the civilian market was concerned. All raw material supplies were cut off, except for manufacturers participating in the war effort. So, Dixie Paint "went to war" in that it began producing paint for the Government.

Then, shortly after the war ended in 1945, Dixie found itself, for the second time in its short life, fresh out of customers. To complicate the problem, there was tremendous competition for the civilian market from hundreds of paint manufacturers who were looking for outlets for their vastly expanded war production facilities. Dixie Paint, though, either had already, or swiftly developed several outstanding advantages.

For one thing, because of their location in Brunswick, Duralite could be

distributed at a much lower transportation cost in the Southeast than the product of the Northern companies. Also, the Duralite line was excellent from a quality standpoint. Then, too, being new in the business, President Walker and his team had never heard the once accepted "axiom" of the paint business, namely, "you can't mass produce quality paint." Being unaware that it "couldn't be done"—they went ahead and did it.

All methods previously employed were carefully studied and continuously improved, both by changing the methods for the better, and, where deemed advisable, by investment in the most modern paint-making machines available.

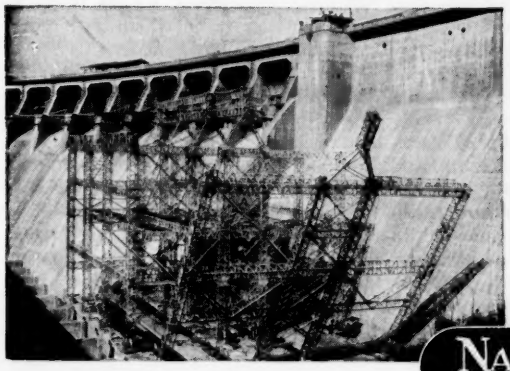
The result is that paint can now be produced at lower cost because of these mass production techniques, while, at the same time, the high standards are maintained. As each paint order is completed in the factory, it goes to the laboratory for testing, instead of to the warehouse or the shipping room, so that no Duralite leaves the plant without laboratory tests.

Briefly, the process starts with the arrival of the dry pigment and barrel shipments, which go to the dry storage area. Arriving liquid shipments are piped to the tank farm. Solid resins for the varnish plant are stored until ready for use, when they are reduced under extreme heat to a liquid state. The various ingredients for a batch of paint go from storage to the Cowles dissolvers, where they are combined into a paste and then they go through a series of roller mills to see that thorough grinding and mixing is attained.

The paint mixture is then carried through overhead pipes to the 2,000-gallon mixing tanks, and, after thorough mixing, to the tinting vats, where, slowly, small amounts of colors are added to the mixture to bring it to the exact shade desired. After laboratory testing, the paint is put in cans and labeled by various types of automatic machines (Dixie Paint has its own label-printing shop).

The company's warehouse has a storage capacity for 200,000 gallons of paint. The company also owns its own fleet of trucks, to insure prompt dispatching of orders.

W. Quealey Walker, President of Dixie Paint & Varnish Company, demonstrates the technique which built his company from a washtub in a back room to a multi-million dollar plant. Pictured is the original washtub which started Mr. Walker in business.



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NASHVILLE BRIDGE COMPANY
NASHVILLE, TENN. — BESSEMER, ALA.

# The South Must Pace Its Industry

**The president of The Southern Company speaks out for the new Southland . . . tells what can be done to insure a continuation of the upward curve of Southern industrial growth . . . points out pitfalls which come with impulsive and indiscriminate solicitation of new industry . . .**

Atlanta executive expresses his views in recent talk before the Southern Association of Chamber of Commerce Executives.

**by Harllee Branch, Jr.**

CHARLESTON, S. C. — The economic resurgence and revitalization of the South during the last decade is known to all the nation. But no one knows better, or appreciates more, than we of The Southern Company and our associates in the Alabama, Georgia, Gulf and Mississippi Power Companies how large a contribution the Chambers of Commerce and their executives have made to this record of regional progress.

We know what your initiative, leadership and energies have meant because we have shared in and profited from them. All businesses benefit from the growth and industrial development of the communities in which they operate, but ours even more than most. For new industries use large quantities of electric power; and the workers attracted by industrial activity, together with their families and all the varied businesses which serve them, are also users of electricity. It is not surprising, therefore, that many years ago our companies have inaugurated industrial development programs, or that we should have so enthusiastically welcomed the opportunity to support and work with your organizations and others in promoting the industrialization of our region.

I should like to do three things in the course of my remarks. First, I would like to give you a brief but comprehensive picture of our new and burgeoning industrial Southland. While each of you is familiar with the advances made by your own community and state, there is a possibility that at least some of you may not have comprehended how these individual segments of economic progress add up to the entity we know today as "The Industrial South."

### *Upward Curve*

Second, I would like to indicate what can be done to assure ourselves a continuation of the upward curve of Southern industrial growth—having in mind that complacency with respect to an existing situation, no matter how excellent that situation may be, can result in economic lethargy and, ultimately, even in stagnation.

Third, I would like to point out some of the pitfalls which may await those who are seeking to build their communities through an impulsive and indiscriminate solicitation of new industries.

In furtherance of these objectives, I invite you gentlemen to be my guests on an imaginary flying tour of the South. Within the space of the next few moments I want to show you a land of diversified and wealth-producing industry which even the most optimistic among us could not have envisioned as recently as a decade ago.

We start our tour here at Charleston, and within seconds after our flight takes off from the airport, we see below us an industrial scene which will typify the remaining trip—modern day, progressive factories producing a variety of goods ranging from pulpwood to cigarettes, from fertilizer to metallurgical products. Our plane circles over the impressive new Busby Park industrial area, now being opened to provide sites for new plants attracted by superb port facilities and the demands and produce of a booming Piedmont and Coastal section. We pass over an 800-acre tract just acquired by one of the nation's largest petroleum companies for a ru-

mored $200-million refinery development.

Now, we turn southward and below us we see the winding waters of the Savannah river, alongside of which is located the world famed Savannah River atomic energy plant.

Then we are flying over my own state, Georgia. Below us is a panorama of forest and pulpmill, aircraft, chemical and automobile plants, textile mills, lush green pastures and thriving meat packing centers. Farther south, we come to Florida, the Peninsula state. Where a few years ago one saw only long stretches of pine forests, citrus groves and cattle ranges, one now views sprawling chemical plants and hundreds of other new and diversified industries.

### Birds' Eye View

Our plane now swings northwestward to Alabama, where coal field and steel mill, lumber yard and textile firm, tire factories and metal fabrication plants, all vie for supremacy in industrial production. Shortly afterward, we are in Mississippi, with its furniture factories, its shipyards, its lumber and veneer mills, and a brand-new coastal development spurred by recent oil and gas discoveries. Next we see the vast oil fields of Louisiana and Texas extending out into the Gulf and supporting a thriving petro-chemical industry. Then we turn northward to Tennessee, where coal mining still is a large industry, but with chemicals, aluminum and other industries rapidly gaining their rightful statures.

Next we are over Kentucky, once the land of tobacco and horses and gracious living; but here, too, we note a "new look" in industry—a host of chemical and tooling plants and other manufactories all over the state. Next we find ourselves flying over Virginia, another state where the fabulous world of chemical and steel production is supplementing the more familiar agricultural pursuits. Finally our flight takes us to North Carolina, where great industries and manufacturing plants have been built to utilize such products as the tobacco leaf, the hardwood and the pine, and the cotton plant, and alongside these are plants turning out a steady stream of electrical apparatus and other machinery requiring the skills of intelligent and teachable craftmen.

Thus, wherever we go, in whatever direction we look, we find evidences of a Southland "on the march"—a Southland in which traditional economic patterns are rapidly changing, with a host of 20th Century industrial innovations —electronics nuclear power, jet propulsion, plastics and synthetics—clamoring for their places in the sun.

We are greeted by a region, which for the first time in its history, is economically on a parity with the rest of the country—a region in which last year three new major industrial plants were announced each working day—a region blessed with an amazing and still largely untapped storehouse of natural resources needed by a world in which science, industry and agriculture are engaged in a deadly-earnest and unceasing race to prevent the kind of human deterioration, strangulation and starvation which pessimistic philosophers have declared to be the inevitable consequences of ever-growing populations.

To keep pace, to assure a continuance of our own economic improvement, and to discharge our obligations to the people of less-fortunate lands the South must constantly bestir itself. We cannot rest on our laurels or even pause to rejoice in our achievements. That brings me to my second point—what can we do to assure ourselves a continuation of the upward curve of Southern industrial growth?

### Natural Resources

The answer to this question is not easy or simple. Obviously, there are many things we can and should do. We must, for example, see that our natural resources are effectively utilized and husbanded and that no one is permitted to recklessly exploit, waste or destroy them. This includes not only the natural resources of field, mine and forest and our priceless heritage of pure and abundant water—but, our human resources as well. We must see that our people not only remain healthy and vigorous—and that they learn new skills and aptitudes—but that their spirits are lifted and enriched, rather than warped and weakened by the urbanization, mechanization and standardization which too often accompany industrial growth. We must also see that in becoming industrialized, we in the South do not lose our appreciation of, or our willingness to defend, the traditions and institutions of a free society—and that we do not barter away our individual dignity and self-reliance for a governmentally-assured security which can only be achieved through regimentation and political serfdom. It may very well turn out, in the long run, that the South's greatest contribution to human welfare will lie in its devotion to and its furtherance of these intangibles of spirit and attitude rather than in the more easily measured output of farm and factory.

Surely we will not forget that other lands have possessed and still possess as many and as varied natural resources as we—but what they lack is our climate of freedom, initiative and individual soverignty and self-assurance. Time does not permit a detailed exposition of the ways in which this climate of freedom can be preserved—but assuredly this audience of Chamber of Commerce executives does not need to be reminded that sound education, political independence and industrial statesmanship are essential.

To the end that our natural resources of men and materials may be fully utilized and not wasted, we must also continue to broaden and expand our research programs and facilities. The key word in the South's present and future economy—next only to the freedom I have mentioned—is, in my opinion, "research." Compare the Southern textile plant of a generation ago with that of 1957. It is like comparing today's automobiles with the bicycles and buggies of the 1910's. Or take the fabulous new Lockheed plant, north of my own home town of Atlanta—already utilizing the new technology of jet propulsion and now about to move into a still newer technology of nuclear propulsion for aircraft—or the nation's first fully-integrated nylon plant near Pensacola, Florida, where Chemstrand today produces more than 50 million pounds of nylon a year—or the spectacular petrochemical plants of the Gulf Coast region—or the marvelously efficient steam-electric generating plants to be found in all our states—take them and search for counterparts in the industry of the South of only a decade or so ago. Your search will be in vain for these prodigiously-productive giants all have developed as a consequence of recent research and scientific discovery. And we have hardly scratched the surface!

### Outlook Good

Frank Soday, president of the Southern Association of Science an Industry, has noted that the resources of the South are sufficient to support an industrial expansion which could make the South the most prosperous region in the country within the next ten years.

"But," he points out, "wishful thinking will not make this come to pass. To make these dreams come true, even to a modest degree, it will be necessary to use to the fullest possible extent the talents of the scientist and the engineer, as well as the organizational and managerial abilities of the manufacturer and entrepreneur."

Mr. Soday adds: "The mere possession of abundant raw materials, a good climate and good soil is no guarantee of future prosperity—Until the vision of a scientist can see in them an answer to a human need, and the engineer supplies the technological skill which enables them to be used, (these assets) really do not exist at all as far as economic value is concerned."

There has been a great deal of talk in recent years—much of it exaggerated—regarding an invasion by Southerners of other regions in quest of industries. It is not surprising, I think, that a region so long subjected to economic and political discrimination, and hence by-passed in the opening of new frontiers, should finally have aroused itself and gone forth to peddle its industrial attractions. But the point is that, if we in the South will now but turn our minds and wills energetically to scientific research—to an investigation of the boundless and presently undreamed-of riches that rest in our soil, climate, minerals and plant life, we will no longer have to go forth seeking industry. The problem of the next generation in our region will be not to find industries but to find suitable sites for those which come knocking at our doors—asking an opportunity to share in our prosperity and our promise. Such research as I have in mind will not only create a new abundance for our own people but for mankind in many other regions of the world.

## Southern Co. Slogan

We have in The Southern Company, a slogan which we use in our national advertising. The slogan is: "The last half of the 20th Century belongs to the South." We believe very sincerely in that slogan but we have not fooled ourselves into imagining that it will come about automatically or without the kind of research which is required to give our resources their maximum usefulness and value.

If you gentlemen who have such a large obligation and opportunity to shape the industrial destinies of your communities wish to build not for today alone but for tomorrow as well, let me suggest that you alert your neighbors to the importance of increased support for research programs—in our schools and colleges as well as in industrial laboratories.

The research of which I speak should be twofold in its aims. It should be designed not only to develop new uses and applications for our raw materials but also to improve the efficiency and economy of our human and natural resources. Adequately endowed and vigorously sponsored such research will enable us to meet changing demands and to avoid the hazards of economic obsolescence which presently haunt England and even some of the older industrial sections of our own country.

## Salesmanship Needed

But industrial statesmanship and research alone will not suffice. Salesmanship also will be required to sustain our economic resurgence. You who belong to this association, more than any other must supply that salesmanship. Here we must keep in mind the slogan of the successful salesman, "Know your product and know your customer." To sell your community as a feasible location for a new industry, you must, know every facet of the community's development and its potentialities. You must have the ability to place yourself in the position of a prospective industry—looking toward your area with the dozens of questions which are part and parcel of every area's screening as an industrial site.

The industrial check list contains many items familiar to all of you. I shall not undertake to mention them here except to illustrate by three or four examples that even though your community may not presently possess all the usual attributes demanded by industry nevertheless nearly all of them, except geographical position and raw material availability can, through the instrumentality of community and chamber cooperation be developed.

Ask yourself, for instance, "Is our location convenient to markets and will it serve as a good distribution point?" A negative answer here may mean simply that you have too long been concentrating on manufacturing concerns alone, omitting development of your community as a wholesaling center or as a regional or district office point as well.

Ask yourself these questions also: What transportation and distribution facilitilities are available in your community?

Is your community adjacent to navigable waterways which, because they have been little used in recent years, may be overlooked as having a special appeal for prospective new industries? I am sure that each of you is familiar with his community's air, rail and highway facilities; but have any of you investigated in recent months to determine how much more passenger and freight traffic would be required to justify lower rates and more frequent schedules?

Put this question on your check list: Are good sites available? If the answer is no, perhaps a selling job at home—convincing your own members of the benefits of an active industrial development program—is needed far more than is a selling job to outsiders. Through such efforts in your own community you may be able to develop industrial parks at the same time eliminating present slums and blight areas.

Or again, ask yourself this question: What is my area's available or potential labor supply? If the reply is a discouragingly small figure, perhaps you need an active and accurate canvass of rural workers in your immediate area who could serve as either a primary or supplemental labor force. And perhaps your community should develop better facilities for training inexperienced people in the basic vocational and industrial skills.

## Community Program

There is another factor I would stress. It is the crucial need for a concerted, over-all community program of industrial solicitation.

Your work as Chamber of Commerce executives is based upon cooperation with the various—and ofter highly unrelated—segments of your community, making of them through your skill and tact a single, well-organized unit with a single goal of objective. Nowhere are your talents along these lines needed more than in the field of industrial promotion. Industries seeking locations no longer are satisfied simply with obtaining the basic physical requirements such as power, transportation, raw materials. They want also to have definite assurance that in coming to your community they have the approval and the encouragement of the many groups and organizations already a part of the area. A stable labor force is an essential part

of any successful business organization. Unless a community actually desires the new industry and its workers, the existence of a stable labor force cannot be realized—and prudent industrialist and their personnel directors know this.

Having urged vigorous salesmanship in calling your community's assets and advantages to the attention of prospective industrialist, I come now to the third and last of the points I wished to make today. This one is a warning—a warning which, I think, should be borne in mind in every industrial solicitation. As Chamber of Commerce executives, you are well aware that the seeking of new industries is not an end unto itself. It is simply another means of assuring a healthy, a happy, a well-balanced and economically sound region—not only for today but for future years as well. It is important, therefore, that emphasis be placed upon a SELECTIVE—rather than an impulsive and indiscriminate—seeking of industry. The question we should ask ourselves is not merely "Will this or that industry come to our region" but also, "How will the particular industry benefit our region?"

A reckless and misguided solicitation of industry—without regard to what the industry offers *us*—can ultimately block the major objectives of any well-conceived community or area betterment program.

### Improved Status

The South's improved economic status was most definitely not gained from manufacturing concerns seeking a "free ride." I have talked with scores of major industrialists who have established, or are contemplating establishing, plants in the South. Not one of them, in the final analysis, has been or is desirous of subsidies or hand-outs. They realize that long-range business prosperity is impaired rather than promoted by such programs. They want to put down their roots in the communities they choose—to be contributing and participating members of these communities. They ask only a *fair* deal —not a bonus or charity—and they certainly do not wish to be paid like prostitutes for industrial companionship. They know that subsidies—whether in form of tax exemptions or gifts of lands and facilities—is the resort only of those who have nothing more substantial to offer and that some day if their operations endure as they intend, they too will have to contribute to the creation of such industrial lures for other newcomers. The only industries, in my judgement, which can be attracted by such inducements are marginal, fly-by-night industries—selfishly seeking to exploit and not to build. Such industries can prove more demoralizing and burdensome to a community than no industry at all. It is not my purpose here to criticize or condemn what any state or community has done—merely to point out that rewards, bonuses, subsidies and inducements, such as I have mentioned, not only are not substitutes for sound industrial development and planning but in the long run may astigmatize or prevent real industrial prosperity. State and local benevolences of this kind are bad enough, but they are as nothing compared with a federal program of industrial subsidy such as is presently being proposed in the Congress. For such a program—no matter how many hundreds of millions of dollars may be spent—cannot attract or permanently preserve industry for any locality which


WITH MODERN MERCHANTS
IT'S THE PACKAGE
AS WELL AS THE CONTENTS

New addition to Belk's Department Store, Charlotte, N. C.
Architect: A. G. O'Dell, Contractor: McDevitt and Street.

One look at the building above tells you Belk's, in Charlotte, knows how to put superior merchandise in a smart package.

Modern architects know that SLATE-BASED SOLITE adds to the beauty of their buildings. They know, too, that it is extra strong . . . extra durable . . . fire resistant. And most important of all, SOLITE masonry units are 1/2 lighter than masonry units made with ordinary concrete . . . effecting tremendous savings in deadweight, time and money.

That is why the architects of this attractive "package"—this impressive addition to Belk's department store in Charlotte—specified SOLITE to be used throughout.

So Light - So Strong SOLITE®

PLANTS:
Aquadale, N. C.
Bremo Bluff, Va.
Leaksville Junction, Va.

OFFICES:
P. O. Box 9138, Richmond, Va.
P. O. Box 1843, Charlotte, N. C.

FOR BETTER BUILDING . . . Consult your architect or engineer. No matter what your construction needs are, professional advice can save you time and money.

lacks the basic attributes which industrialists seek. Its only effect will be to promote useless and more costly bureaucratic planning and, by adding to the already heavy burden of federal taxation it may even discourage normal industrial expansion for all regions. Everyone of us should speak out against such senseless federal extravagance.

In conclusion, let us take a look at the future. Are we in the South in the midst of a temporary boom—with the traditional "bust" period due to arrive at some unnamed date ahead? Or is our current prosperity the healthy kind, with a normal, prosperous future slated for years to come?

I can give you my own company's thoughts on these questions. In January the board of directors of The Southern Company, with a billion dollars already invested in plants and facilities in this region, voted approval of the largest construction budget in its history. That vote assured that approximately $139,000,000 will be expended during 1957 alone on new construction projects in the four Southern States in which we operate. Current indications are that for the next three years, our company's construction expenditures will exceed $425,000,000.

Look about you—in your own home towns, your states and your regions—and you will see that our company is not the only industrial enterprise which has faith in the future progress of the South. Our plans only mirror the belief of scores of other firms throughout the Southland—some of them smaller in scope, many of them larger, that the South's best years still lie ahead. Our region, I am confident, still is building and growing and—with your skills and your efforts—is contributing more and more to a stronger America, and a happier and healthier world.

The last half of the twentieth century does indeed belong to the South!

# SSIRCO OFFERS FACT FOLDERS TO INDUSTRIES

ATLANTA.—Southern States Iron Roofing Company here has announced the immediate availability of an exclusive library of product reference material entitled "Southern States Iron Roofing Company Fact Folders."

This unique collection consists of 21 colorful folders on major product lines merchandised by Southern States, and they offer a new pattern of presentation which might serve as an example to other businesses and industries.

The folders are specifically designed for placement in the filing cabinets of purchasing agents, design engineers, or any business executive who has always desired easy accessibility to product information.

Walter Gans, SSIRCO advertising director, pointed out that the fact folders are arranged in numerical and alphabetical order and contain the latest descriptive data on maintenance and end use items ranging from aluminum roofing material to industrial metals of every description.

In addition, he said further, each folder contains a specification sheet outlining the availability of the items contained in the folder, their weight, length, color and packaging details. The specification sheet is of the same format as the folder in order to avoid misfiling of the information.

Gans claims that this service is unusually complete and is one that has never before been so adequately prepared by a distributor. He described it as "the most comprehensive reference library on metals and building materials ever produced."

Any one of the 21 folders or the whole group will be furnished to industrial concerns of all types either by inquiry to company headquarters or through SSIRCO salesmen. Changes in the specification sheets which may occur in the future will be mailed to all Fact Folder holders by the company's advertising department.

## Books and Reports

**Increase Production with Ceramic Cutting Tools.** Leaflet published by the Small Business Administration, Southeastern Regional Office, 90 Fairlie Street, N.W., Atlanta 3, Georgia.

**Estate Planning.** By James A. Byrd. An annotated bibliography. Bureau of Business Research, University of Texas, Austin. 41 pp. 50 cents.

**Imagination, Key to Achievement.** By Edward B. Newill. Allison Division of General Motors Corporation, Indianapolis, Indiana. 12 pp.

**The Consumer and Antitrust.** By Jules Joskow and Irwin M. Stelzer. Council on Consumer Information, Colorado State College, Greeley. 31 pp. 50 cents.

**Glass Containers 1956.** Glass Container Manufacturers Institute, Inc., 99 Park Avenue, New York 16, New York. 48 pp.

**The Making, Shaping and Treating of Steel.** United States Steel Corporation, Office Service-Stores, 525 William Penn Place, Pittsburgh 30, Pennsylvania. 932 pages. $7.50.

**Texas Retail Lumber Dealers, survey of cost of doing business in 1956.** Bureau of Business Research, University of Texas, Austin. 18 pp.

**Planned Buying and Controlled Merchandising for Retail Furniture Dealers.** By A. Hamilton Chute. Bureau of Business Research, University of Texas. 45 pp.

**Forest Statistics for the Coast Plain of Virginia, 1956.** By Mackay B. Bryan. U. S. Department of Agriculture Forest Service, Southeastern Forest Experiment Station, P. O. Box 2570, Asheville, North Carolina.

**Where You Come In.** By L. E. Judd. Goodyear Tire & Rubber Company, Akron 16, Ohio. 17 pp.

**Alabama's Changing Agriculture.** By Ben T. Lanham, Jr. Bureau of Business Research, School of Commerce and Business Administration, University of Alabama, University, Alabama. 8 pp.

**Report on the Potential for Waterborne Commerce on the Potomac River at Alexandria, Virginia, and Washington, D. C.** Virginia Ports Authority, Norfolk, Virginia. 171 pp.

**Chemical Safety Data Sheet SD 25, Hydrofluoric Acid.** The Manufacturing Chemists' Association, Inc., 1625 Eye Street, N.W., Washington 6, D. C. 46 pp. 50 cents.

**Industrial Water Needs.** Oakland County Planning Commission, 1 Lafayette Street, Pontiac, Michigan. 54 pages. $2.

**Reinforced Concrete Pavement Design Practice in Michigan,** by C. H. Cash, and Economy of Standardization of Reinforcement for Concrete Pavements, by Warren D. Fish. American Roadbuilders Association, World Center Building, Washington 6, D. C. 15 pp.

**A Tax on a White Horse.** By Roger M. Blough. United States Steel Corporation, 71 Broadway, New York 6, N. Y. 16 pp.

**Industry's Betrayal of Basic Research.** American Council of Independent Laboratories, Inc., 4302 East-West Highway, Washington 14, D. C.

**Human Relations in Business.** By Keith Davis. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N. Y. 557 pp. $6.50.

**The Georgia Tech Research Reactor Project.** Engineering Experiment Station, Georgia Institute of Technology, Atlanta 13, Georgia. 29 pp.

**Public Management of Private Employment Volume—A Proposal.** By Richard Hazelett. **A Comment.** By Albert G. Hard. Reprinted from the American Economic Review, available from Richard Hazelett, 19437 Battersea Boulevard, Cleveland 16, Ohio.

# Direct Service to Mexico Inaugurated By Eastern

NEW YORK.—Eastern Air Lines has inaugurated direct New York to Mexico City service via New Orleans, the first regularly scheduled service on the new route having been started on July 23.

# SASI news

**NO. 1 OF 3 PARTS**

## MARKET CONFERENCE REPORT

This is the first of a three-part series reporting the results of the First Southwide Market Research Conference recently held in Miami. The conference was sponsored by the Southern Association of Science and Industry, and cosponsored by the First Research Corporation of Miami.

The meeting was held in two sessions. The first session presented a panel-seminar composed of representatives of business activity which utilize market research information in selling distribution and services. The first article in this series contains the text of an address delivered by Frank Parsons, Manager of the Source Development Department of Sears, Roebuck and Company's Southern Division.

The second session presented representatives of groups which compiled market research data for use by others. An example of this type of activity is given in an address by J. Robert Covington, Vice President of WBT Radio in Charlotte, N. C. Mr. Covington describes the part which consumer media play in the widening market research activity in the South.

The basic motivation for this conference was to point up certain specific areas where the wider use of market research could be of substantial value in serving the expanding industrial and consumer markets of the South. Subsequent issues of MANUFACTURERS RECORD will present other addresses and some excerpts from the discussions held.

(Another article from the conference by Vernon Childress, Manager of Marketing Research and Development for the Tennessee Corporation, is presented elsewhere in this issue as part of a special survey of the chemical industry in the South.)

*Frank Parsons is a native of Greenville, Michigan. He has a degree in Business Administration and is a graduate of the John Marshall Law School of Chicago. Parsons has been with Sears since 1937, and has been in the South since 1955. His position in Source Development gives him a broad picture of the manufacturing activity and potential in the South. Here he presents some penetrating thoughts on opportunities which should not be overlooked.*

## RETAIL MERCHANTS

### by Frank Parsons

In discussing this subject on behalf of Southern Retail Merchandising, I will be primarily speaking in terms of what our own company does as, obviously, that is what I know the most about. However, I am reasonably sure that most retailers, particularly those with multiple store outlets, would have the same need and use for market research information.

Very briefly I would like to point out the numerous aspects of our business wherein we must rely on market research.

#### Store Location

First—those factors having to do with the decision as to "what" and "where" with regard to locating a new retail outlet. This involves the primary selection of what city, then where within the selected city is the best place commensurate with our own policies with regard to store location.

Then, there is the question of what type of store, which involves a matter of selection of the lines of merchandise to be carried, and then the most important question of how large the store should be. All of this has to do with the question of the consumer market, the buying power and certain factors with regard to the competitive picture that exists at the selected store location.

In arriving at the final decision with regard to the above proposition, statistical market research data concerning the consumer buying power is obviously very vital. We have, by reason of experience, evolved certain formulae into which we work such statistical data to come to a decision. You are all familiar with Sales Management publication and probably the Market Guide published by the *Chicago Tribune*. Both of these are sources of the information which I am speaking about. We also contract for specific Research Projects.

Obviously the lower average income per capita in the South has an effect on the numbers of people required to support a retail outlet.

#### Population Surveys

I might point out in this connection, that the growth factors, as evidenced by comparative figures over a period of time, are frequently much more influencing than the mere statistics of the day. This has to do not only with the entire population of a city but also a particular area in which a store location is involved. We obviously are not only speaking of population in itself—but the consumer buying power, the available amount of money to be spent for the kind of merchandise we sell is of primary importance. Actual physical market surveys by our own people to observe conditions in a town

Participating in the Southwide Market Research Conference (left to right) W. H. Bernstrom, Reynolds Metals Company, W. Wailes Thomas, Southern Bell, and Dr. Lawrence Tidrick, Southwest Research Institute.

are added to the published existing research data. Experience has taught us that although there is obviously a considerable speculation or risk in any decision with regard to store location, our research data when properly put together will present a certain picture that will indicate positively the preference for a particular city and location as compared to others—and to defy such indicated conclusion enhances the risk considerably.

I might add that in considering this over-all matter from the level of top management of our company on a nation-wide basis, the decision as to what area in the United States we will spend our money on new additional or better outlets in relation to other areas, obviously, must also be a reflection of market research data and is based to a great extent upon growth potentials. In this connection, our company was dedicated to grow with the expanding South many years ago and a considerable part of our over-all expansion program has been employed in the South.

## Trading Areas

In considering the final location of a store, size and type, we take into account not only the immediate surrounding area but the reasonable distance from which you can expect to draw customers. It is interesting to note that today most Southern cities that have active industrial development program talk in terms of the area, not just the city limits, and the research data which they in many instances put together in very fine usable form is based upon at least one or two counties predominantly served by that city.

Another important facet of the research in connection with retailing is the industrialization of an area and its resulting payrolls. People today not only drive quite a distance to shop in their favorite store, they also drive quite a distance to work, so a rather large area must be investigated when researching the extent of the industry and the type of industry that supports the market which you propose to enter. It is in this area of research that one must pretty well be on his own, as there is not too much available usable and reliable information.

## Competition

Another vital factor of research in connection with the actual operation of any retail store is very thorough knowledge of local competitive conditions by lines and even items of merchandise. Here again you are pretty much on your own to determine that data to your satisfaction.

Up to now I have discussed the need for market researching as it applies to retail selling. We have use for a similar approach to the location of what we call a Catalog Order Office, which is a new and rapidly growing focal point for mail order sales. In this instance we are talking about the location of an outlet in which no merchandise is carried but where the customer can select from our catalog and place his order directly with us—and where we facilitate and expedite the delivery of the merchandise through the Order Office to the customer.

The location of these Order Offices employs not only the type of research referred to in connection with our regular retail stores, but also considerable research within the historical data accumulated by our mail order business, which is primarily a reflection of where our actual sales come from and as the concentrations at some point exist, it is determined that the location of an Order Office would be of considerable service to our customers.

The cost of such a sales outlet, of course, adds considerably to the cost of doing our mail order business. It is, therefore, of extreme importance that the very careful research in the potential consumer market for mail order selling reflects the need for a location where we can anticipate a substantial increase of our mail order business, and where such increase will compensate for the additional cost.

## Supply Sources

There is also an entirely different market in which most retailers are interested. That market concerns the manufacturing of the goods to be sold. Obviously, as a mass purchaser, we are approached by many manufacturers trying to sell their product and a great deal of the goods we buy come from the seller-buyer relationship. In this case the location of the manufacturer is strictly coincidental. However, due to the nation-wide increasing population, the expansion of our selling outlets and the resulting sales increases, we have begun to take a more scientific view with regard to *where* we buy goods. That is, where the manufacturing is located in relation to our sales potential.

Our company is committed to an over-all policy of trying to balance purchases and sales within a given area. We want to help support by our purchases the economy of the area in which we sell goods. I might point out here a fact which may be of general interest—Sears is now buying in our Southern Territory about the same dollar value of product that we are selling. Only 10 years ago the amount we bought was considerably less than what we sold.

In connection with this policy, our company has seen fit to establish at various points in the United States what we call Source Development branches of our General Merchandise

Office in Chicago. That office in Chicago is the headquarters for all of our buying. As we are committed to a centralized buying program, these localized source development offices are actually researchers for our centralized buying office.

It is their purpose to find new factories for us to do business with, within the area assigned to each office. Therefore, our Atlanta Source Development office is engaged in searching out manufacturing wherever it may exist in the South. In so doing we are trying to reflect, among other things, specific consumer needs of not only the territory but of even one city if and where they are peculiar to that area and has the resulting manufacturing that you would not find in other parts of the country.

This whole activity involves to a great extent market research, not only to determine the particular need and to evaluate that need, but also to locate manufacturing.

Although there is some manufacturing of wearing apparel in the South, the creative design center is still primarily in the New York area. Our textile mills are located in the South to a great extent now, but we are still shipping millions of yards of goods to the style center where the actual manufacturing of garments takes place. They will probably never be completely changed — however, it points up the need for creative designing in the South in order that we may increase the number of garment manufacturing plants.

### Eye-Appeal

In this connection, I might also point out the aspect of creative designing in packaging. This, too, is primarily centered in the New York area. Packaging is today of extreme importance in the marketing of goods where so much is on a more or less "serve-yourself" basis. This industry, of course, follows closely the location of the factories producing the goods and is to a great extent lacking in the South.

Further, in this connection—to bring the point close to home—I would point out the need in this immediate area for what is known as an aluminum hurricane awning. This awning has the peculiar feature of being adjustable to cover tightly the whole window area, as compared to the fixed rigid awning which is manufactured and sold generally throughout the country for no other purpose than keeping out the heat of the sun. The market for this product exists primarily where there is a frequency of severe wind and storm damage. To find a manufacturer of this product we came to Miami, about the only place in the country where this hurricane type awning is produced and sold.

For quite a different reason, we have come to Miami to buy women's ready-to-wear. Because of the influence of the resort atmosphere and public demand, there is a rapidly growing style influence and an important industrial development has taken place as a result. The goods manufactured in Miami with the Miami style influence sell all over the United States, including California.

This aspect of our business, I am sure you can see, involves research of both manufacturing and selling markets—to locate them in the first place, then to evaluate them to determine how important it is for us to buy and sell the goods.

I have only sketchily covered the extent to which our company uses market researching. I would like to say in closing that in the complete retailing picture which involves the manufacturing, the buying, the selling and the servicing, there is, in my opinion, unlimited use and need for market research. It is important to bring it home to the South, and to keep our growth accurately specified in all its terms, is vital to successful business. The general acknowledgment that growth is taking place in the South not only in population but in the improvement of the average income is in itself of some interest to most business people. But specific detailed data obtained from extensive research, pinpointing and highlighting such growth, becomes in the final analysis the usable tool for anyone in the retail selling business.

*J. Robert Covington is a native of Raeford, N. C. and a graduate of Davidson College. He entered the Air Force in 1941 and served throughout World War II attaining the rank of lieutenant colonel. After the war he resumed an interrupted career in journalism by joining Radio Station WBT in Charlotte as Promotion Manager where he now holds the post of Vice President-General Manager. He points up here the variety of marketing services which advertising media such as radio, television, and newspapers, who reach the huge consumer markets can render to their customers.*

## CONSUMER MEDIA IN MARKET RESEARCH

### by J. Robert Covington

Ten years ago when I first came to work as Promotion Manager for radio station WBT, I found that one of the big problems in selling our station to national advertisers was the low rank of Charlotte nationally in city population. Everybody who shared this problem realized that the city population alone did not truly represent the importance of the Charlotte market. To help solve this problem we did a very simple thing. We drew rings around Charlotte on a radius of 25, 50 and 75 miles. Then, taking U. S. Census figures, we added up the population of the counties which fall within these rings and estimated as honestly as possible population of the fractions of counties which fall within these rings. The result was a total population for a 25, 50 and 75 mile radius.

We then followed exactly the same procedure with several other Southern cities each having a central city population greater than Charlotte. In the end, we were able to show a better picture of the relationship of the Charlotte market to the other markets and proved that while Charlotte ranked low on a *city population* basis, it climbed many rungs up the ladder when compared with other cities on an *area* basis.

This was a relatively simple job of

research. We gave it correspondingly modest production—simply a bar chart on a single piece of 8½ x 11 paper, but the reception awarded this simple piece of market research far exceeded our wildest dreams. Since 1948, this chart—revised, of course in 1950 to take advantage of the new census figures—has been reproduced in newspapers, magazines, TV slides, brochures, both simple and elaborate, and even in book matches. We have run thousands of copies for use by the Charlotte Chamber of Commerce, banks and other financial institutions, printers, contracting firms, trucking firms and a wide variety of businesses interested in giving outsiders a better picture of the Charlotte market. Today, 10 years later, it is one of our best selling tools and we still have requests from all sorts of institutions in Charlotte for copies.

I emphasize this simple market research project because it illustrates the kind of thing the newspapers, radio and television stations of the South are doing all the time and it suggests a source of help for you in your own community of which you may not be aware or which you may not have fully utilized.

### Sales Tool

To help you utilize this research force, I would like to tell you a little about the newspapers, radio and television stations in your city which you may not know or may have forgotten. In the first place, these media are *forced* to conduct research and utilize it in their selling. What a newspaper has to sell is the attention of a certain number of readers living in a certain area and having a certain amount of money to spend. Similarly, a radio and TV station is selling the attention of a certain number of listeners and viewers likewise living in a certain area and having a certain amount of spendable income. Now you can not successfully sell the attention of these people to an alert advertiser unless you know quite a bit about them. You have to know how many there are, a great deal about their living habits, something about their likes and dislikes and, if any large number live outside of the city, what their relationship is to the city itself. The natural result is that your advertising media represent an immediate source of basic information about your city.

This is true not only because they engage in research in order to sell their paper or their radio or television station, it is also true because they are in the news business. Very frequently, if somebody is considering building a new plant, buying a large amount of real estate, generating some more electrical power or doing any one of a number of things that make the town more attractive to industry, you will find that your advertising media know about it. They also know about trends in prices, cultural activities, politics and the other factors that establish the climate of a community. Their employees will be found on most of the boards and committees which ramrod the civic, charitable and social progress of the area. If you do not know these advertising media people, you will probably find it highly helpful to get acquainted and find out what they have that you can use. May I suggest three possible benefits from getting to know the research directors or the research minded executives of your newspapers, radio and television stations.

### Use of Data

The first advantage is that if you have not already done so, you will probably find that these people have available right now some information you can use. This will not always be in the form in which you can use it. We have a human inclination to present our facts so that they are almost inseparable from the things we are trying to sell. Specifically, any presentation of market research by WBT will be intertwined by facts about our station; however, we will give you permission to use the information or reproduce the information for you "without the commercial." Our population comparison used through the years by scores of Charlotte firms is a classic example.

Second—you may find these newspapers or broadcasters have source material containing information which they may not have used themselves, but which would be very valuable to you. For example, at WBT, we have a small but very carefully selected and useful research library. Because we have emphasized and publicized our research so much, we now find that we have people of all kinds in Charlotte calling us for information. This is not only valuable to us as public relations but has put us on some research trails which we had not thought of. One day in 1956, the president of a wholesale appliance firm called me and asked whether we had information on homes in our county wired for electricity. We found it and supplied it to him. This started me to thinking of other things about local living conditions which would be interesting and useful to know. The result was a general survey of home equipment which we have conducted from time to time.

Third—you may undoubtedly be able to enlist the help of your advertising media in research excursions which they have not previously considered. Because they are research minded, because they have research resources, you will doubtless find them most interested in discussing with you any ideas you have or facts which would help in the development of your city. For example, about 1950, our city treasurer approached us for help on a brochure he was preparing to help sell some city bonds. One feature of the brochure was a comparison of Charlotte with all other U. S. cities of the same size on the basis of income, retail sales and many other business indices. We worked closely with the treasurer on this and many later projects. We have also used in our own promotion the idea of presenting parallel statistics on Charlotte and other cities of similar population. This thought leads very naturally into a word or two about a market research organization which we have in Charlotte and which you might want to consider establishing in your own community.

### Research Council

About 5 years ago, we became aware that we were not the only people in Charlotte interested in facts about the Charlotte market. Indeed we found we were not the only people who were doing research. We found, for example, that the rate engineer for the Duke Power Company was doing exactly the same thing we were doing in counting noses within circles drawn about Charlotte on a map. To be sure, he was using circles of a different size because they fitted his purpose better. But, nevertheless, we realized that there were many people in Charlotte interested in the same research problems which were absorbing our time and interest.

The result was that with the assistance of the Charlotte Chamber of Commerce, we formed an organization

known as the Greater Charlotte Research Council. The purpose of this organization is to share, evaluate and propagate hard facts about Charlotte and the area it serves. The organization has been going for about 5 years now and there is hardly a meeting when some member does not bring facts which can be used by the others.

In this organization, the search for facts has precedence over the spirit of promotion. As a result, the Council has given careful scrutiny to some generalities which have been used in the promotion of Charlotte in the past and has decided to temper or eliminate them because they could not find the necessary proof for them.

Typical members of this research council include a vice president of the chamber of commerce, the local managers for several airlines, the rate engineer for the power company, the treasurer of the city, head of the city-county planning board, representatives of the railroads and the telephone company, the executive vice-president of the Merchants Association as well as representatives of the newspapers, radio and television stations. I can not recommend too highly that you establish such a group in your city if you have not already done so.

In closing, let me reiterate that your advertising media are of necessity research minded. That they have on hand already research material you can use, that they have unused research resources and they will more than likely join in reasonable research projects which you may suggest. It only remains for you to make full use of these resources and suggest to them how they can help you.

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*Vernon Childress is a native of Birmingham, Alabama. He attended the Alabama Institute of Technology where he received a BS in Chemistry in 1939. Before joining the Tennessee Corporation he was associated with the B. F. Goodrich Company, the O'Sullivan Rubber Company and General Electric. He was also briefly an instructor in marketing at the University of Massachusetts. He joined the Tennessee Corporation this year to organize the Market Research Department here in Atlanta. His comments here delivered at the Southwide Market Research Conference on the need for research into Southern chemical markets is particularly appropriate as a supplement to the growth industry survey of the chemical industry appearing in this issue.*

## MARKET RESEARCH FOR CHEMICALS

### by Vernon Childress

I am delighted with the opportunity of being here to put into words the strong convictions I have that marketing research in the chemical industry is a "must." However, just as marketing research is essential—as in the case of most things, it can be overdone. One of the favorite stories of Harold Smiddy, GE vice president, relates to this by commenting that you don't need a survey to discover there's an elephant in your bathroom. Why, then, do we need surveys?

Marketing research is the function of determining and interpreting facts objectively. It is not concerned with guesswork. It is a tool of management, yet is not "management" itself. When used properly, it can affect business in many ways, from the simple matter of determining a salesman's territory potential to making possible sweeping company decisions that may involve the expenditure of tens of millions of dollars in capital investment. To be specific about it, why do you suppose Escambia Bay Chemical Company is located at Pensacola, Florida? Why not Texas? Why not New Jersey? Why not Illinois? Certainly in each of these alternative spots a petrochemical feed stream was available. I dare say that, at each of these locations, all of the factors affecting site location are such that there are pluses and minuses for each. I am sure that the principles of good marketing research were employed.

If you were president of a chemical company, then, why would you locate your plant in one area rather than another? Regardless of what you call it, someone conducted what I would call a market survey to appraise such factors as size and location of the market, the effect of plant location on supplier preference, the availability of raw materials and facilities, etc. It doesn't always happen this way. About 40 years ago, it is said that Mr. Henry Ford apparently took some of his people out for an automobile drive on the south side of Detroit, walked to a spot and said "Here we will build our new plant." This was the start of the River Rouge Plants. Undoubtedly, there are still management decisions made by strong individuals on what is apparently a whim or a personal prejudice rather than an objective appraisal of a situation.

#### Need For Facts

I would like to believe, anyway, that men who make decisions of this scope actually make their own surveys. Perhaps they might even deny their existence. Yet I am very sure that virtually no business decisions are made without having adequate facts on which to base them. That marketing research is a "must" in the chemical industry is well recognized. The industry has an association called the Chemical Market Research Association, with some several hundred members, all of whom are either directly or indirectly concerned with marketing research. To the best of my knowledge, this is the only organization of its type in the country. This alone demonstrates the importance of marketing research in the chemical industry.

I am sure that there is not a thinking man in the chemical industry who doesn't recognize the need for marketing research in some phase of his business. However, I have generalized here—so let me be specific with a case history of the way marketing research saved a considerable amount of money for a large chemical manufacturer. After much thought concerning a declining market position in a specialty chemical field, this manufacturer found that the problem was one of delivery of small—meaning less than carload—orders. The idea was conceived that the company would have a "milk-route" type of sales op-

eration whereby a large truck would be filled with a number of different grades of this chemical product and would drive around to the customers involved. The thought was that the purchasing people could decide what their needs were on a day-to-day basis and take from the truck the 1, 2, or 3 drums of materials needed and have them as needed. The obvious effect on inventory control, better factory scheduling, etc., as well as decreased cost of delivery makes a potent sales appeal. When the project was well into the planning stage, marketing research was involved in solving the question: How much of what should be put on this truck? A close analysis made, using direct interview techniques, showed that the demand by individual customers was so broad that, in order to carry even one drum of each grade required for a given sales territory—which covered a radius of 250 miles from the producing plant—not one truck would be required but a small convoy would be required. Putting the dollars and cents signs on the cost involved made it quite obvious that this innovation, however brilliantly conceived, could not possibly have resulted in a profitable operation for the company. This example of a problem of distribution research is but one of the many applications of marketing research.

### How-to-do-it

After considering the needs for marketing research, how does the chemical industry conduct it? Most companies either provide an adequate staff and conduct their own marketing research surveys, or they have the nucleus of an organization and hire the services done. To over-simplify, the principal responsibilities of marketing research are really in three parts. First, and of supreme importance, is the necessity of keeping an adequate library in the fields in which you operate and maintaining continual surveillance of the industries whom you supply, as well as the industries with whom you compete, and the industries you supply with raw materials.

The second phase is one of gathering information, either by the use of a mail survey, or direct interviews, or by using other techniques, such as "show interviews" where you ask a limited number of questions to an unscreened sample, etc. The third phase is one of correlating the data, interpreting and weighing the information obtained, and forming conclusions and recommendations, which are usually formalized in a report.

I am obviously neglecting some of the other phases of marketing research—such as business appraisals, market forecasting, technological development appraisals, etc.

### Interpretation of Data

No business can be managed properly without adequate standards of management. What may appear to be short range success may be a failure. For example, suppose you improve your sales 10% over your previous year—a good job, many may say—yet if the market you serve doubled in that period, you lost industry position and did a poor job of management. Indeed, it was worse because you did not even recognize the situation.

There are a number of independent marketing research agencies in the country that are equipped to handle virtually any chemical problem. Even though you establish your own marketing research organization, you usually like to use outside agencies under three circumstances:

1) when you do not wish to disclose your identity in connection with a specific project;
2) when you wish to get an independent view of a situation—one about which there could be no question as to prejudice;
3) when, because of time commitments, you could not do the job using your own organization, or you consider an outside agency more qualified than your own group.

One of the challenges of the chemical industry in the southeast is to provide the base on which competent independent market research organizations, located in this area, can grow and serve our needs when required.

### Costing Research

I am sure every one of you who has taken French remembers the story of the French teacher who says, "All French verbs are regular except these"—and then hands you an inch-thick book. The same analogy might apply to the cost of marketing research. Just putting down an arbitrary figure will merely define the target and establish a base for operation. In the portion of the chemical industry with which I am most familiar—the raw material and component suppliers—the cost of a marketing research organization should vary between 0.1 and 0.5 of one per cent of net sales billed. As the needs for marketing research approach more closely the consumer market, the expense goes up. For example, the marketing research problems of a chemical company whose end products are in the consumer trade would undoubtedly require a different type of marketing research organization from a company such as a soda ash supplier. Judgment factors have to be exercised on the part of any company management with regard to the establishment of a marketing research function. It is a complete waste of money to establish a marketing research department just because it is fashionable in the business world to have one. You then make the same decisions that you would have made anyway but you have marketing research. This is comparable to being against sin and for motherhood. Fortunately, there are relatively few executives in industry today who are "for marketing research" and yet who do not use it.

### Not Always Perfect

There have been many sterling examples of both the use and misuse of marketing research. I am sure that you all recognize in retrospect failures in the American business picture that are directly attributable to poor, inadequate, or incorrect marketing research. One noteworthy example is the failure of the *Literary Digest* following their complete error in the 1936 Presidential election. I am sure that some of the remarkable instances of success in the chemical industry, as well as other industries, are directly related to successful marketing research.

And so, gentlemen, marketing research is valueless unless it is used properly. At the same time, it is one of the most inexpensive management tools available today for the successful growth of a business enterprise over a period of a number of years.

**A special survey of the Chemical Industry appears on page 25.**

# SASI Distinguished Service Awards for 1957

## Industry

Rockefeller

Winthrop Rockefeller is a Southerner by choice and adoption. One of the five sons of John D. Rockefeller, Jr., he moved from New York to Arkansas in 1953 to found a great cattle enterprise near Little Rock named *Winrock.*

The Arkansas which Rockefeller found a few years ago was very much different from the Arkansas of today. Then it had the second-lowest per-capita income in the nation. Jobs were scarce (400,000 residents had been forced to leave the state for lack of jobs.) Agricultural enterprise was floundering and major industry was almost non-existent. In 1955 Governor Orval Faubus organized the Arkansas Industrial Development Commission and asked Rockefeller to head it. The challenge was accepted.

Mr. Rockefeller organized the businessmen of the state into a cooperative effort to bring out-of-state industry in. The group also assisted local enterprise to expand and flourish. In addition to spearheading a phenominal industrial development, the group has set about to enlarge cultural and educational opportunity. Mr. Rockefeller and his Commission encouraged community playhouses, library, symphony orchestras and opera. Educational facilities were expanded and the state began to welcome the technological industries which can only exist where personnel are trained. The Southern Association of Science and Industry expresses the admiration of the entire South for a job carefully conceived and well executed.

## Science

Vagtborg

Dr. Harold Vagtborg moved to San Antonio, Texas in 1948 from the Midwest Research Institute in Kansas City to found the great research center which is today the influential Southwest Research Institute. He was also largely responsible for building the Armour Research Foundation in Chicago which he headed from 1937 to 1945.

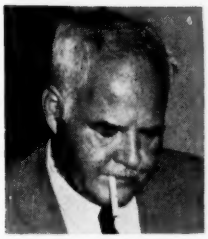
The first year of operation, Southwest Research Institute had a research volume of $48,000. This year it will be in excess of $5 million. On the 1500 acres of marginal ranch land outside San Antonio where the Institute is located, there is today a growing Science City employing over 500 people where there was once only wasteland.

While his experience has been mainly in the field of applied industrial research, Dr. Vagtborg is also a firm believer in basic research. The Southwest Foundation for Research and Education has grown under his leadership to a point where it is the largest independent biomedical research center in the Southwest. Soon work will begin on a new $500,000 laboratory which will house some of its activity.

Because of his vision, energy and personal magnetism he has attracted top scientists from all parts of the world. He has also made it possible for many Southern scientists to remain in the region and work toward the betterment of their home areas.

Dr. Vagtborg has taken part in many civic undertakings, too numerous to list here, lending generously of his time and energy to the improvement of his local area and to the progress of the South.

## Journalism



Lesesne

Henry Lesesne is a native of Sumter, South Carolina, where he has been residing for the past two years. He is a veteran Southern newspaperman, wire service executive and freelance writer whose journalistic career spans more than 30 years, all of it in the South.

He worked on several newspapers in the Carolinas and Georgia before joining the Macon, Ga. *Telegraph* staff in the early 1920's. Subsequently he became a member of the staff of the International News Service in Atlanta and shortly thereafter organized the Raleigh, N. C. bureau of INS which he headed for two years. He remained with INS until the early 30's when he moved to the Associated Press, first in Charlotte, N. C. and later as day editor and features editor of the Atlanta bureau of AP.

Mr. Lesesne left the AP in 1947 to take up a career as a free-lance writer. Since then he has served as the principal correspondent in the Southeast for the *Christian Science Monitor,* and has been a frequent contributor to the New York *Herald Tribune,* the Baltimore *Evening Sun,* Sunday newspaper supplements and feature syndicates, national periodicals and major trade journals, specializing in the growth industries of the South.

Mr. Lesesne has distinguished himself many times through the years with his tireless efforts to tell the dramatic story of the South's renaissance to the nation. His forceful writing and careful, incisive reporting have been a credit to the South which honors him.

**John D. Wise, SASI Regional Vice President, is President of Wise Motor Company in Hazlehurst, Mississippi, Vice President of the Bank of Hazlehurst and current President of the Mississippi Economic Council. Mr. Wise has been active in many area development and civic undertakings, including past State Vice Presidency of SASI as well as having served as a President of the Mississippi Automobile Association.**

**Arthur H. Jones, SASI Treasurer, is Vice President of the American Trust Company in Charlotte. Mr. Jones is a graduate of Oberlin College and the School of Financial Public Relations at Northwestern University. He is a Director of the Charlotte Chamber of Commerce, active in Red Cross and Community Fund campaigns, and is a past State Vice President for North Carolina for SASI. Mr. Jones is also currently active in the Southern Industrial Development Council.**

**James A. Dildy, Vice President for Arkansas, is Director of the Industrial and Area Development Department of the Arkansas Power and Light Company. After serving in the Army Air Corps as an officer during World War II, Mr. Dildy joined Reynolds Metals Company. He has been with Arkansas Power and Light since 1952. Active in many civic and professional organizations, he is a member of the Society of Industrial Realtors and Director of the Southern Industrial Development Council.**

**Edgar J. Forio, Vice President for Georgia, is Senior Vice President of the Coca-Cola Company. Mr. Forio is a graduate of Loyola University with a degree in Law. After serving in the Marine Corps during World War I, he joined the Coca-Cola Company. During World War II, Mr. Forio represented the soft drink industry in Washington. He is an active participant in more than 28 civic organizations, many on a national level. Among current posts are Advisory Council of the Georgia Heart Association and President of the Georgia State Chamber of Commerce.**

**Joseph S. Horan, Vice President for Louisiana, is Research Director of the Louisiana Department of Commerce and Industry in Baton Rouge. He received his AB and Professional Graduate degree in Library Science from Louisiana State University. He also holds a degree in Foreign Trade from the American Institute of Foreign Trade. He was Southern Field Representative for Theta Kappa Phi National Fraternity for six years, and he taught government and science for two years in Louisiana high schools.**

**Dr. Randall Klemme, Vice President for Oklahoma, is Director of the Oklahoma State Department of Commerce and Industry. Dr. Klemme is a graduate of Grinnell College and Iowa State College, receiving his Ph.D. from the latter institution. He has been with the U. S. Department of State and been on the staff as educator and executive of several universities. In 1940-41 he was a Fellow of the General Education Board of the Rockefeller Foundation.**

**William C. Windsor, Jr., Vice President for Texas, is President of Windsor Properties, Inc. of Dallas, A graduate of Washington and Lee and the University of Missouri, Mr. Windsor is founder of the Brook Hollow Industrial District in Texas, one of the most successful industrial development enterprises in the country. Mr. Windsor was a carrier pilot in the Navy during World War II and the Korean War. Active in many local civic and business ventures, Mr. Windsor was the recipient of the 1956 Easterwood Cup for outstanding service to the real estate profession.**

**Charles W. Coker, Vice President for South Carolina, is the Executive Vice President of Sonoco Products Company in Hartsville. Mr. Coker has been with Sonoco since 1930. A graduate of the University of South Carolina and Harvard, he is also an officer or director of several national organizations and is ver yactive in civic affairs. Mr. Coker has been an executive of the Boy Scouts of America and a Trustee of the University of South Carolina. He is also a former director of the State and National Tuberculosis Association.**

**J. Stevenson Peck, Vice President for Maryland, is Assistant Vice President of the Union Trust Company of Maryland. Mr. Peck is a graduate of the University of North Carolina, and attended Rutgers Graduate School of Banking. He is a Director of the Baltimore Chapter of the Red Cross, National Conference of Christians and Jews, Junior Association of Commerce and a member of the Executive Committee of the Community Chest of Baltimore.**

**Shields Johnson, Vice President for Virginia, is the Vice President and General Manager of the Times-World Corporation of Roanoke. Since joining the Roanoke *World-News* in 1931 as a reporter, he has risen steadily through the executive ranks to his present position. Widely known throughout the newspaper industry, Mr. Johnson is the former Vice President of the Advertising Federation of America. He is a graduate of Roanoke College and is very active in local and regional civic affairs.**

# CHARLESTON RUBBER CO.'S GROWTH IS PHENOMENAL

## Less Than 10 Years Old, This Carolina Firm Anticipates Grossing $1 Million In 1957 Sales

CHARLESTON, S. C.—From four skilled workers in a tiny plant of 4,000 square feet in 1948, to a plant which today employs 74 persons and occupies more than 65,000 square feet in seven modern buildings—that's the story of the Charleston Rubber Company.

The success of the company, located in Stark Industrial Park near here, is attracting national attention. According to William J. Prohaska, President, the company's gross sales for 1957 are expected to exceed a million dollars. Charleston Rubber has distributors in 48 states, Canada and Mexico, and export offices in New York City.

Recently, the Charleston Rubber Company announced a plant and equipment expansion program costing more than $100,000. This was the second expansion in two years. The first unit to be constructed was a large new air conditioned building of fireproof masonry construction, in which is carried on exclusively the manufacture of linemens' gloves. With this move, the company increased by 50 per cent its manufacturing capacity of these gloves.

In the 1957 plant expansion program the research testing laboratories building of the company was doubled in size, additional equipment was installed, and the staff of research chemists was increased. Inspection, packing and shipping buildings were enlarged and remodeled; and new machinery for these departments was added. Also, the clerical and filing offices were enlarged.

Scheduled to begin later in 1957 is further enlargement of the industrial safety products manufacturing building to insure adequate protection facilities to meet the steadily increasing demand for these Charco products.

After more than two and a half years of specialized laboratory research and testing, the firm has announced perfection and production of a shoulder length special formula neoprene protective glove for use by scientists and workers in the nuclear energy field, and in bacteriological experimental work. The company already has established itself as a national leader in the fields of research, development and manufacture of rubber protective gloves and sleeves for use by linemen and high voltage workers, and of rubber protective gloves and safety equipment for general use in industry.

The organization was founded in 1948, with William J. Prohaska as president; R. M. Evans, vice president and sales manager, and Paul A. Belknap as secretary-treasurer and technical director. At the time of organization, the three founders already had a combined total of 75 years of experience in the manufacture of natural and synthetic rubber gloves. The same officers guide the growing organization today.

The principal manufacturing program of Charleston Rubber until 1954 was production of linemens' natural rubber gloves, rubber sleeves and allied safety equipment for public utilities and others working with high voltage electricity. In 1954, the company announced perfection of processes of manufacture of top quality synthetic and natural rubber protective gloves for use in industry, and created its industrial glove division. The physical properties of the plant were enlarged, a new building was constructed, and personnel were added. The featured new products included the Hy-Sol synthetic rubber glove, and a all neoprene glove marketed under the name of Neo-Sol.

Paul A. Belknap says: "The year 1956 was our greatest year in sales of Charco products, and as one of the first of January, 1957, we had on our books far more orders than at the beginning of any previous year. It became apparent that further expansion of our production facilities was necessary to enable us to meet the ever-growing demand and to expedite delivery of orders for our several products."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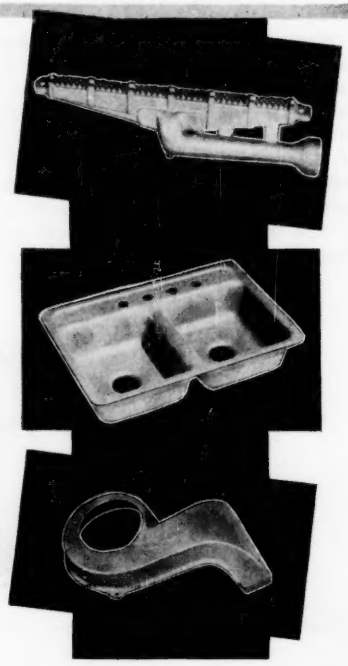


# Southern Industry Aided By Research

## Programs At the Georgia Tech Engineering Experiment Station Reap Benefits For All Segments Of the Economy

**by Dr. Frederick Bellinger**

ATLANTA.—For years, many of the industries of the South and the Georgia Tech Engineering Experiment Station have been growing through working together in research. Today, over 90 industrially sponsored projects are underway in the South's largest engineering and industrial research organization.

In view of the widely publicized movement of industries into Georgia as well as the growth of the existing industries, it is almost inevitable that this research will grow. For, the rate of effort to date is but a small fraction of the work which could be going on if our regional industries take advantage of the facilities at their doorsteps to insure a continuous growth of prosperity.

It has been pointed out many times that an industry must grow by simple expansion or by diversification of products in order to stay alive in an industrial atmosphere of expanding economy. Research is the insurance that an industry will survive.

The word research simply means "to study closely." In most cases it requires only cooperation between the trained researcher and the business man to transform the results of this study into practice. Properly carried out, research processes do not fail. Results may be negative, showing that further work should not be done, but to say that such a result is a failure is incorrect.

### Research and growth

Scientific research, both basic and applied, has had a great deal to do with the advancement of our modern technological civilization.

Dr. Frederick Bellinger, Assistant Director of the Georgia Tech Engineering Experiment Station. His article is reprinted from The Research Engineer, Tech publication.

*Research creates new products and new uses for old products.* Eighty-five per cent of today's farm chemical business involves chemicals that were not available just 10 years ago. Ninety per cent of today's prescriptions use medicines that did not exist 15 years ago. Of 8,000 chemicals listed in a recent catalog, 2,900 of them did not appear in the catalog published by the same firm only 12 years ago.

*Research creates new jobs.* Typical examples show that one new chemical production worker creates about four jobs in other manufacturing plants and about 20 new jobs including retailing.

*Research conserves material.* The increasing use of thiocarbamates in place of copper compounds in controlling fungus diseases of agricultural crops has released millions of pounds of copper for other uses, as well as doing a better and cheaper job.

*Research conserves health.* The discovery of such new drugs as the sulfa compounds in 1935 and penicillin in 1942 has had remarkable success in decreasing the death rate in this country as well as shortened the disability days of people suffering from infectious

diseases.

All these factors help create a higher standard of living for everyone.

### Industrial research today

There are three basic reasons why industrial research is being carried out in this country: (1) to develop new products in order to diversify lines and gain an advantage over competitors (roughly half of the research dollars goes in this direction), (2) to improve the equality and uniformity of products and processes and to lower cost of production (forty to fifty per cent of the research dollar is spent in this field), and (3) to obtain basic data on properties and reactions, leading to more complete knowledge of what is being produced and what might be produced (United States' industries spent on the average of about 8 to 10 per cent of its research dollar in this field).

Chart number 1 is referred to quite often by people selling research. The quick conclusion drawn from the chart is that an industry spending more money on research is assured of a higher growth rate. Producers of a few stable items in, for example, the raw materials class, are perhaps justified in appropriating as low as one per cent of their net sales dollar for research. Other industries having products subject to early obsolescence are justified in spending 5 per cent or more of the net sales in new product development and research.

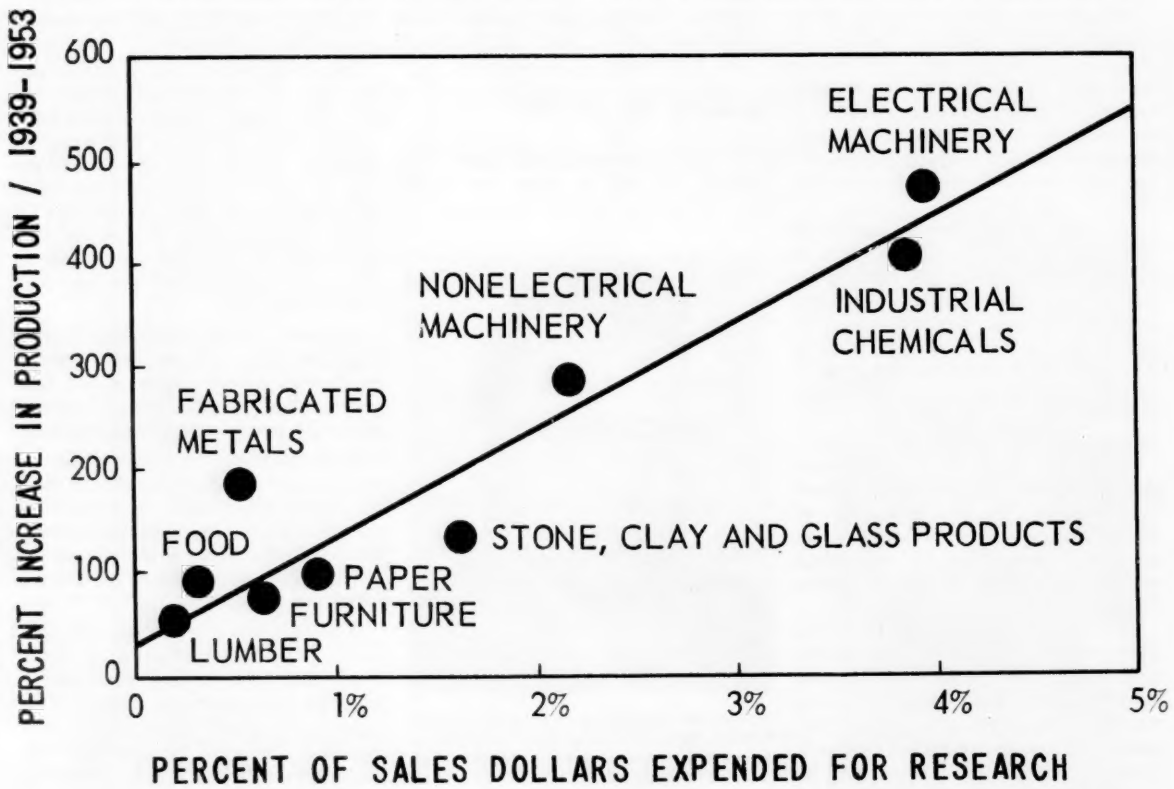
Small industries usually start with research on their existing products and feel that they themselves are best qualified to do it. This may be true in most cases, but it should not be overlooked that a fresh viewpoint obtained from outsiders can develop novel ideas which may be just the answer to a difficult problem.

Individuals and small industrial firms are turning to "study" centers such as the Engineering Experiment Station with problems that require the attention of experts in more than one field. Cooperative research, with the cost and profits shared by an association of industries, is becoming more and more popular due to rising costs and a severe shortage of men trained and capable of undertaking research work. It is not easy to sell competitive industries on the benefits of cooperating in research, yet much is to be gained through this method.

*A few years ago a growing surplus of tallow and greases faced United States' renderers. On the west coast, 25 companies, each feeling too small to underwrite a research program, formed Tallow Research, Inc., and employed a research institute to undertake research for them. Within 2 years, new products were developed using tallow as a raw material. Consequently, new markets were opened for the disposal of the surplus. This is, as it should be, a somewhat typical rather than an unusual example.*

The success of cooperative research

**CHART 1—CORRELATION OF RESEARCH EXPENDITURES AND GROWTH RATE OF INDUSTRIES**



by industry depends only on the common problems of commercial importance, active cooperation and participation by the cooperative members, and a guiding committee or group to see that the research results are translated efficiently into practice.

### Georgia Tech's research

The Engineering Experiment Station —one of Georgia Tech's largest divisions—was authorized by the State Legislature in 1919 for the purpose of promoting and furthering engineering and industrial research and aiding in the economic development of the State and the region.

As an integral unit of Georgia Tech, the Station can arrange for the services of many experts to supervise and carry out research projects. The members of Tech's teaching faculty — trained in many diverse fields—are ideally suited to carry out both sponsored and basic research. Today, the Station employs around 70 teaching faculty members to aid in the planning and execution of many of its research programs. Because this teaching staff is not available for full time research work, the Station has had to build up a sizable force of qualified research specialists. Bolstered by nearly 200 technical and administrative assistants, these scientists and engineers work on studies varying from such projects as development of an automatic yo-yo assembling machine to wave guide development, radioisotopes research and the investigation of a new series of chemical reactions.

One of the byproducts of research is the protection giving the sponsor by patents. Georgia Tech's research policy gives all patent rights to the individual sponsor. Publication of information as well as prosecution of a patent is under the complete control of the sponsor.

In some cases, Tech may work with industry on a cooperative basis, financially, and the division of benefits is agreed upon prior to starting work. Normally, however, the benefits to Georgia Tech are in the area of broadening its contacts, interests, and experience of its personnel and in the discharge of one of its basic responsibilities—to assist in the economic development of the region.

It is not necessary to extol the breadth and capabilities of Tech's facilities and personnel in the sciences or on the football field. But it may not be so well known that the Engineering Experiment Station has several branches with the specific responsibility of working with industry.

The Industrial Development Branch is one such operation. It operates in the field of industrial economic research—assimilating, correlating and analyzing the facts needed to assess the industrial potential of the state and region. It also is charged with determining what industries possibly can be developed or expanded and to assist established industries to become more efficient or more productive. It eventually will work in area development, energy economics, nuclear economics, water economics, market research, company organization and development, manpower utilization, operations research, production research, engineering economics and even agricultural economics.

Another branch is the Industrial Products Branch of the Chemical Sciences Division. This is a laboratory experimentation group staffed to permit feasibility studies on materials and processes. In other words, its responsibilities are to answer the questions "Will it work?" or "Is it any good?" or, "How should it be made?" Still an-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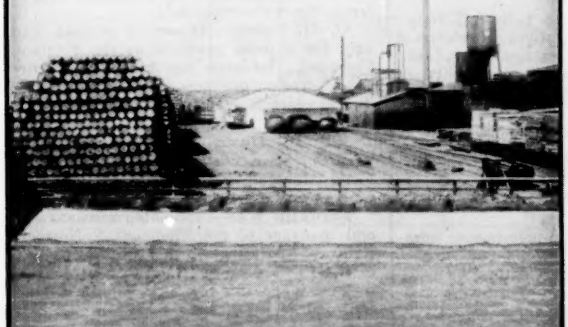

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other branch is the Technical Information Section. This group collects, compiles, digests, and reports technical information. Its work can be a single item study, a specific technical field study, or a continuing service to furnish the sponsor a considered abstract of information as it appears.

The Engineering Experiment Station operates through the Georgia Tech Research Institute (GTRI), a non-profit organization incorporated to serve as the Station's contractual agency.

Tech's sponsored research is done on a project basis. Usually the person, or persons, with a problem comes to the Station for preliminary discussion. At this time, the problem is clarified, and it is specified that the Station can accept work only if it involves research of a type not suitable for industrial or professional consultants in the region. In addition, this work must be within the interest, capabilities, and responsibilities of the Station.

On the basis that cost estimates and all other phases are mutually acceptable, an agreement is signed and a scientist or engineer is assigned as a project director. This man will have full responsibility to see that the research is conducted properly and that the sponsor is kept advised through reports, verbal or written, as agreed upon. The sponsor receives bills for actual expenditures for personnel and materials, etc., on the project. Overhead charges for use of the facilities, power, water, procurements and other office and administrative expenses are based on a percentage of the direct personnel charges. No charges in excess of the amount initially agreed upon can be made without prior approval of the sponsor. This system protects the sponsor from unexpected expenses and in many cases results in the total cost to the sponsor being less than estimated.

The Medical Division through a small hospital and other facilities is conducting a long-range study of the treatment of malignant diseases with special emphasis on the effects of radiation and radioactive materials on these diseases. The Medical Division programs, not open to the general public for purposes of treatment, include fundamental studies of radioisotopes appraised to be of potential medical interest, biomedical research, a medical-physics program which includes teletherapy, brachytherapy and thyroid-uptake calibration, and a clinical program primarily built around the use of radioisotopes in the diagnosis and treatment of disease and in basic investigation.

The University Relations Division administers Commission special fellowships in radiological physics, industrial hygiene, and nuclear energy technology. Other programs administered by the Division as a part of the Commission's general program of assistance in the field of education are utilization of the high-speed electronic digital computer at Oak Ridge National Laboratory by university personnel of the region; arrangements for both faculty and graduate students to carry out research projects, principally at Oak Ridge National Laboratory, utilizing research equipment normally not available on campuses; sponsorship of symposia and conferences in fields related to the atomic energy programs; and arrangements for outstanding scientists from Oak Ridge to lecture and conduct seminars on university campuses.

Operating from its headquarters at the American Museum of Atomic Energy, the Museum Division operates the Museum and carries out the Commission's national traveling exhibits program. The program includes three large van-type units, five smaller walk-through mobile units, several package-type exhibits of varying size, and high school demonstration units. The Museum Division also carries out a program of assistance in connection with science fair activities.

Many suggestions, mathematical equations, evaluation charts, etc. have been proposed as quasi-scientific methods of determing whether or not a research project should be initiated as well as the degree of urgency. But in the final analysis, the decision is based upon the judgment of the executive who may, or may not use one or more of the equations to assist him in clarifying the picture.

Obviously, preliminary research, such as a feasibility study, does not require complete detailed data, but the Engineering Experiment Station believes it best to make rough *guesstimates* on the phases noted in the accompanying chart before spending the sponsor's money.

For small applied research items, one rule that may be applied with caution is that the estimated net return must equal to or exceed three times the estimated research cost before the decision is made to go ahead with the project.

Fortunately, in today's research world, it is a relatively rare thing to find such small returns indicated. Research has proven itself over the past 30 years to be one of the best investments industry can make. And this area has yet to really scratch the surface of its own potential.

**Table 2—Project Evaluation**

| | |
|---|---|
| TITLE: | |
| SCOPE: | Objectives — sources of information Time, Costs, patents, probability of technical success. |
| MARKET DATA: | Total market competition, applications, % at market available to us. |
| PLANT DATA: | Plant capacity, construction completion date. |
| CAPITAL REQUIREMENTS: | Plant investment, working capital cost of production $/lb. |
| ECONOMIC EVALUATION: | Price, sales volume, net profit return on investment. |
| RAW MATERIAL REQUIREMENTS: | |

## NEWSMAKERS

**Harold B. Ackerman** — Named merchandising manager of the Chemstrand Corporation, Decatur, Alabama, and Charles G. Flynn, appointed promotion manager.

**J. L. McGhee**—Appointed freight traffic manager-sales, Southern Region, Norfolk Southern Railroad.

**Harold T. Sumner**—Named manager and plant engineer for the new plastic molding plant of Northwest Plastics, Inc., at Gastonia, North Carolina.

**W. E. Brown**—Retired August 1 as superintendent of compressor design engineering for Texas Gas Transmission Corporation, Owensboro, Kentucky, after 50 years of service in the engineering field.

**O. H. Storey**—Appointed product manager for gypsum products by the Flintkote Company. The latter has under construction a new gypsum products plant at Sweetwater, Texas, which is scheduled for completion this fall.

**Jeff W. Davis**—Elected executive vice president of Kershaw Manufacturing Company, Montgomery, Alabama. **William A. McKay** was elected vice president-sales.

**Franklin Way**—Appointed assistant general manager of the Piedmont & Northern Railway, Charlotte, North Carolina.

**R. P. Tallman**—Named Southwestern traffic manager for the Gulf, Mobile & Ohio Railroad, New Orleans.

**R. L. Lock**—Elected an alumni member of the Auburn Research Foundation of Alabama Polytechnic Institute. Lock is vice president in charge of engineering at Anderson Electric Company, Birmingham.

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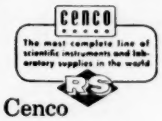


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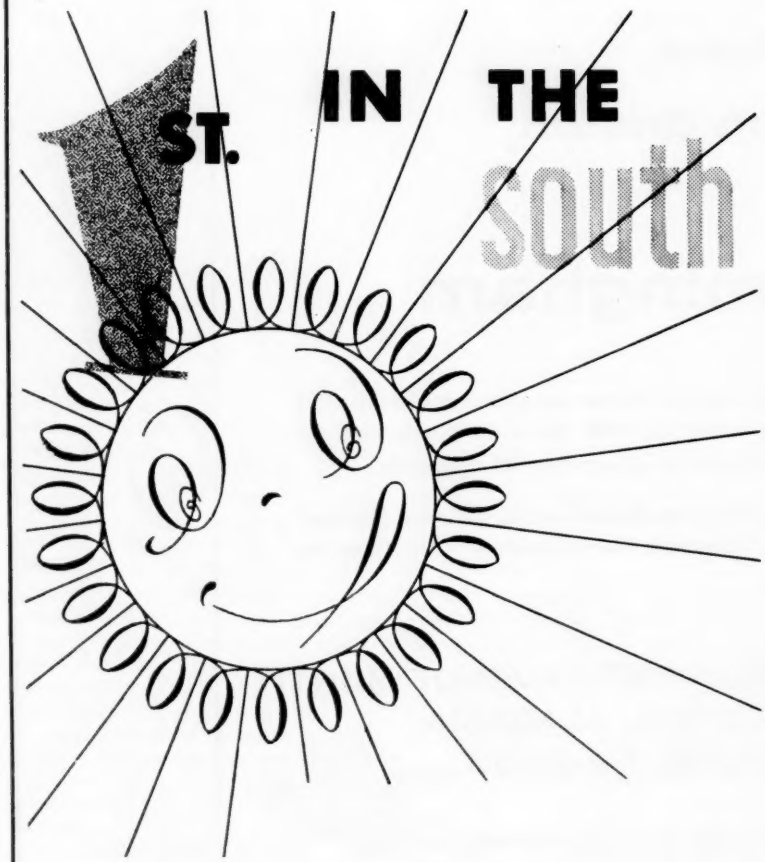


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METHOD OF PAYMENT ( ) Check enclosed ( ) Bill firm
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ADDRESS .....

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**METAL PROD. MNFG CO. S.E. Tex.** (Utility tables, barbecue bars, shelving, laundry tubs, etc.—all modern design: most in decorator's colors!) A-1 loc. 13,000 sq. ft. Xcptnl wrk. cond. & functional eqpt. Nets $26,000! Last yr. vol: ¾ million! Write for brochure! Ref. B 9107.

**MNFG & RETL Sales,** Venetian Blinds, alum. windows, & glass doors, Cen. Ga. Netting $12,850 plus, 18-county protec. accts! Write for details. Ref. B 9231.

**JOBBING MACHINE SHOP,** Cen. Pa. (Special. in precision prts & assemblies.) 4 acres w/17,168 sq. ft. bldg. Xlnt eqpt & A-1 loc. for raw mat. Accts thruout States! '56 sales over $160,000. Write for brochure offering real oppty! Ref. B 42593.

**MANUFACTURING,** heavy **FARM EQPT,** Cen. Iowa. (also parts). Est. 1895 w/3,300 ret. dealer accts! Over 4 acres w/120,000 sq. ft. under roof! Direct R.R. spur! $22,000 income from sub-lease! Realistic assets! Write for detailed brochure & photo! Ref. B 62240.

**FARM IMPLEMENT MANUFACTURING**—Midwest. Trade Name estab. '45. Over 1000 dlrs-dist. Plant 37,300 sq. ft. 5½ acres RE (opt.). Good labor-management. Ask $750,000. 29% down will handle. Not a distress sale. Write for brochure. Ref. B 62290.

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Very profitable incorporated Ceramic Tile distributorship in Florida. Reason for sale: health. Overhead low, favorable lease, well established business, annual sales in excess of $500,000 with net profit before officers' salaries and taxes of $100,000. Price $300,000. For more detailed information write: Box MR 90-101.

## FLORIDA LAND WANTED

Firm with nationwide experience in real estate development and promotion is interested in teaming up with owner of large South Florida tract. Desire promising area large enough for long-range project involving development of residential and commercial sections. Contact MR Box 90-206.

## INSURANCE INVESTMENT

Client desires to invest in small insurance firm offering specialized line to industrial plants in South. Experienced in sales promotion, wide contact with potential customers. Write MR Box 90-123.

## WE WANT INDUSTRY!

This small Southern community in the heart of an agricultural area desperately needs a manufacturing plant to provide jobs for people leaving farms and young people just getting out of school.

For a reliable company we will put up plant to your specifications and provide rent-free for a reasonable period. You won't have any labor problems if you locate with us. MR Box 90-105.

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For sale or lease: brick and concrete block building with large drive and parking area. Would be suitable for trucking or wholesale. Air conditioned offices with modern rest rooms. Contact MR Box 90-202 for further information and details.

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**Southwide Bulletin Board**

**MANUFACTURERS RECORD**

**North Atlanta 19, Georgia**

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## ADVERTISING REPRESENTATIVE

Representation for Southeast and Southwest for MANUFACTURERS RECORD and INDUSTRIAL DEVELOPMENT. Houston or Dallas office desired to sell advertising space for these two publications in the fastest-growing market area in the country. High potential for aggressive salesmen — must know the advertising field. Send resume giving full particulars to:

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## SYSTEMS AND PROCEDURES EXPERIENCE

We are seeking college graduate about 35 years of age capable of handling machine applications working with designers on appropriate system. Our organization is rapidly expanding with all benefits included and substantial salary. Southwestern location. Send complete details of past experience to MR Box 90-305.

## ENGINEER

Rapidly expanding firm desires experienced Industrial Engineer capable of accepting responsibilities. Must have experience in Electrical Wire and Cable field. Good salary and many excellent opportunities. Reply to MR Box 90-302.

NATIONALLY KNOWN SOUTHERN ENGINEERING FIRM, Has opening potential for Chief Engineer. Graduate Engineer, age 45-55, experienced in engineering organization and administration, with thorough knowledge and experience in industrial, commercial and institutional design and construction work. Give detailed historical and professional records, availability and salary requirements. All inquiries CONFIDENTIAL. Write Box MR 90-401.

## Wholesale Experience

Desire married, settled man in mature 30's; BS in Economics; 10 years experience in wholesale and retail securities. Must presently be Manager of firm. Must be able to relocate and travel. Reply to MR Box 90-304.



### CHIEF METALLURGIST, LABORATORY MANAGER

Age 49, married. B.S. Chem. Engrg. Will relocate. 22 years with large independent automobile mfrs. Reported directly to V. P. Mfg. Directed all metallurgical research and development for all divisions: Automotive, marine, diesel engines, and aircraft gas turbines. Present salary $20,000. AGENCY Contact Box 90-137.

## IMPORTANT

When replying to classified advertisements with no address given, write MR Box ....., Conway Publications, North Atlanta, 19, Georgia.

## Controller

Seven years assistant controller for large textile manufacturer with 15 branches. Responsible for cost accounting functions, preparation of budgets, analyses, projections and investigations for top management in establishing sales, manufacturing and expansion policies. Also 13 years experience as chief cost accountant for another textile company. Member NACA. In forties, married with family. College graduate. Desired salary $14,000. Contact Box MR 90-128. AGENCY.

POSITION DESIRED IN EASTERN UNITED STATES in administrative or general management. Age 25, married, six years experience in supermarket management, has just received Law Degree. Interested in position where legal education can be used as background. For further details write to MR Box 90-306.

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Apache, twin engine, 270 hours total time, Auxiliary gas tank, oxygen equipped, and all instruments with two radios. New paint job. One owner company plane with all bulletins up to date. Price $23,500. For additional information contact MR Box 90-122.

## SALE OR LEASE

A full-fashioned hosiery mill desires to sell, lease or convert to a desirable and profitable manufacturing venture on a joint operation. For information communicate with Macon Hosiery Mills, Inc., P. O. Box 890, Macon, Georgia.

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1955 Cessna, 310 Twin. 315 total hours, 40 since completely major overhauled, relicensed, January. Repainted 1956. Undamaged, beautiful. Complete auto-pilot and radio cost $17,000. Aircraft complete cost $74,000. Firm delivered price $42,-900. Write MR Box 90-121 for particulars.

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A bit of intelligence just received by the Colonel says that there has been developed a new personal strike-cost computer. With this informative little gadget, a striking worker can tell just how much he is losing, even if he doesn't know exactly why.

For example, if a worker earning $82 a week went on strike for 20 weeks, and returned to the job with an increase of 10 cents an hour, the new computer shows him that it would take him seven years and 51 weeks to get back the pay he lost on the 20-day strike.

### HIGHER EDUCATION

While passing through a certain Southern college town this past quarter, the father of a student at the school there decided to pay his son a surprise visit, even though the hour was late.

He arrived at the boy's fraternity house, rapped loudly on the door, but failed to arouse anyone.

Finally, after more noisy knocking, a voice responded sleepily from a second floor window, "What the h--- do you want?"

"Does Jim Jones live here?" the father asked.

"Yep," the voice said, "just drag him on inside."

### BACK SLAP

An Atlantian, who has learned from sometimes bitter experience, observes: "It's a good bet that when somebody slaps you on the back, he's trying to make you cough up something."

### SPIKED

The president of a big railroad in the South, well known for his attention to detail and economy, was making one of his periodic inspections one day when he discovered a perfectly good spike lying on the roadbed.

Picking up the spike, he immediately and angrily sought out the section foreman. Luckily, the latter saw him coming and thought fast for an explanation. "Gee," he called, running forward, "I'm surely glad you found that spike, sir. I've had three men looking for it for nearly a week."

### NEED THE GAS

An Alabamian remarked to an oil tycoon friend of his the other day that the nation simply can't afford to have a gasoline shortage, because half the cars must keep moving to leave room to park the other half.

# ★ THE SOUTH'S HONOR ROLL ★

## HERE ARE THE FAR-SIGHTED FIRMS AND INSTITUTIONS WHICH HAVE JOINED FORCES TO SUPPORT THE SASI PROGRAM FOR THE BENEFIT OF ALL THE CITIZENS OF THE REGION

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Metal-Katcher Co., Louisville
Miller and Rhoades, Inc., Richmond
Mississippi Chemical Corp., Yazoo City
*MISSISSIPPI POWER CO.*, Gulfport
*MISSISSIPPI POWER & LIGHT CO.*, Jackson
*MISS. VALLEY GAS CO.*, Jackson
Monsanto Chemical Co., Anniston
Monsanto Chemical Co., Texas City, Tex.
Nashville, Chatt. & St. R. R. Co., Nashville
National Brands, Gulfport, Miss.
Nat'l Fruit Produce Co., Winchester, Va.
Ness Sanitary Wiper Co., Asheville, N. C.
*NEW ORLEANS PUBLIC SERVICE, INC.*, New Orleans
Newport News Shipbuilding & Drydock Co., Newport News, Va.
The News & Courier Co., Charleston
Norfolk and Western Railway Co., Roanoke, Virginia
Oklahoma Gas & Electric Co., Okla. City
*PEMCO CORP.*, Baltimore
Philip Morris Co., Ltd., Richmond, Va.
*PHIPPS & BIRD, INC.*, Richmond
*PLANTATION PIPE LINE CO.*, Atlanta
Wm. P. Poythress & Co., Richmond
The Progressive Farmer Co., Birmingham
Quality Control Prod., Inc., Durham, N. C.
*RALSTON PURINA COMPANY*, St. Louis
Reynolds Metals Co., Arkadelphia, Ark.
Richards & Assoc., Inc., Carrollton, Ga.
Rittenbaum Bros., Atlanta
Riverside Oil Mills, Marks, Miss.
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*RUST ENGINEERING CO.*, Birmingham
*SAVANNAH SUGAR REFINING CORP.*, Savannah
Seaboard Air Line R. R. Co., Norfolk
*SEARS ROEBUCK & CO.*, Atlanta
Shell Chemical Corp., Atlanta
Shenandoah Life Ins. Co., Roanoke
Smith-Douglas Co., Inc., Norfolk
Snively Groves, Inc., Winterhaven, Fla.
*SONOCO PRODUCTS CO.*, Hartsville, S. C.
*SOUTH CAROLINA ELECTRIC & GAS CO.*, Columbia
South Carolina Natl. Bank, Columbia
South Fla. Test Service, Miami
Southdown Sugars, Inc., Houma, La.
Southeastern Clay Co., Aiken, S. C.
*SOUTHERN BELL TEL. & TEL. CO., INC., Atlanta*
Southern Natural Gas Co., Birmingham
*SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.*
*Southland Co.*, Yazoo City, Miss.
Southland Paper Mills, Inc., Lufkin, Texas
*STATE PLANTERS BANK & TRUST CO.*, Richmond, Va.
Tampa Electric Co., Tampa
Taylor & Caldwell, Inc., Walkerton, Va.
*TELLEPSEN CONSTRUCTION CO.*, Houston
*TENNESSEE COAL & IRON*, Fairfield, Ala.
Tennessee Corp., College Park
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Tenn. Products & Chemical Corp., Nashville
Texas Foamed Plastic Corp., Gonzales, Tex.
Texas Gulf Sulphur Co., Newgulf, Texas
The Thomas Ala. Kaolin Co., Baltimore
Times-World Corp., Roanoke
*TRUST COMPANY OF GEORGIA*, Atlanta
Union Bag & Paper Corp., Savannah
*UNION PLANTERS NATIONAL BANK*, Memphis
*UNION TRUST CO. OF MARYLAND*, Baltimore
United Gas Pipe Line Co., Shreveport
Utilities Construction Co., Charleston, S. C.
Virginia-Carolina Chemical Co., Richmond
*VIRGINIA ELECTRIC & POWER CO.*, Richmond
West Point Mfg. Co., Shawmut, Ala.
West Va. Pulp & Paper Co., Charleston
*WESTERN ELECTRIC COMPANY*, Winston-Salem, N. C.
*WHITNEY NATIONAL BANK OF NEW ORLEANS*
Will Corp. of Georgia, Atlanta
Wilson Paper Box Co., Richmond
*WINDSOR PROPERTIES, INC.*, Dallas
Wise Motor Co., Hazlehurst, Miss.
*WOLVERINE TUBE*, Decatur, Ala.
Zep Manufacturing Company, Atlanta, Ga.

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*NOTE: Any firm doing business in the South is eligible for membership in the Southern Assn. of Science and Industry. For detailed information and membership application blank contact SASI Headquarters, Conway Bldg., North Atlanta 19, Ga.*

# Rolling Steel Doors

## *Manually, Mechanically or Electrically Operated*

MAHON CHAIN-GEAR OPERATOR

MAHON STANDARD POWER OPERATOR 920-P

In truck openings, loading dock openings, and railroad openings, in modern plants and warehouses where the time element and operating space requirements are primary considerations, the rolling steel door has no equal . . . because, a quick-opening, quick-closing, power operated rolling steel door saves both time and space. The vertical roll-up action is fast—requires no usable space either inside or outside the opening. And there are no overhead tracks or other obstructions to restrict headroom and interfere with crane handling or stacking of goods or materials adjacent to the door opening. No other type of door can give you this space-saving compactness in operation . . . and no other type of door can give you the positive security, firesafety and permanence inherent in a good rolling steel door. The all-metal construction of a rolling steel door reduces maintenance to a negligible factor, and assures you a lifetime of continuous, trouble-free service. When you buy a rolling steel door, it will pay you to check specifications carefully . . . you'll find that Mahon doors are built better to give you better service over a longer period of time —for instance, the galvanized steel in Mahon curtain slats is BONDERIZED and DIP-COATED with Synthetic Enamel which is baked on at 350° F. prior to roll-forming. This is just one of the extra-value features of Mahon Rolling Steel Doors . . . comparison will disclose many others that add up to a much better door investment. See Sweet's Files for information or write for Catalogue G-57.

**THE R. C. MAHON COMPANY • Detroit 34, Michigan**

Sales-Engineering Offices in Detroit, New York and Chicago • Representatives in Principal Cities

Manufacturers of Rolling Steel Doors, Grilles, and Automatic Underwriters' Labeled Rolling Steel Fire Doors and Fire Shutters; Underwriters' Rated Fire Walls; Insulated Metal Curtain Walls; Electrified M-Floors; Acoustical and Troffer Forms; and Steel Roof Decks and Long Span M-Decks.

ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Shown above are Eight of Thirty-four Mahon Rolling Steel Doors installed in a new, modern building for the Giant Food Distribution Center, Landover, Maryland. Eighteen of these doors were installed in Double Truck Openings and Four in Railroad Openings. Stanford Construction Company, Inc., General Contractors.

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